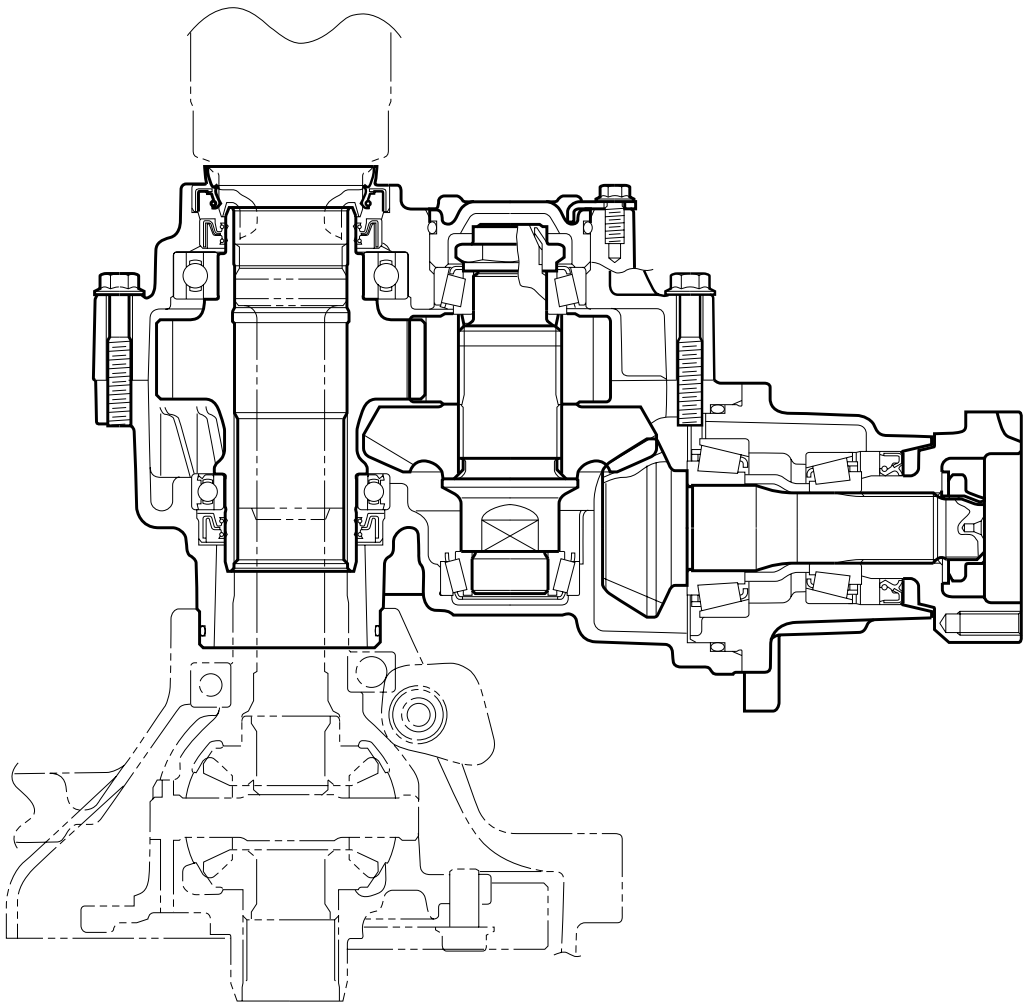


TRANSFER (TYPE T1E-N1)

OUTLINE	TR- 2
SECTIONAL VIEW OF TRANSFER	TR- 2
SPECIFICATIONS	TR- 2
COMPONENTS	TR- 3
TRANSFER	TR- 4
PRELIMINARY INSPECTION	TR- 4
REMOVAL	TR- 5
TRANSFER OUTPUT GEAR SUBASSEMBLY	TR- 8
TRANSFER INPUT GEAR SUBASSEMBLY	TR-11
FRONT BEARING RETAINER SUBASSEMBLY	TR-12
INSPECTION	TR-18
ASSEMBLY	TR-18
INSPECTION AFTER ASSEMBLING	TR-22
SERVICE SPECIFIED VALUE	TR-25
SPECIFIED VALUE	TR-25
TIGHTENING TORQUE	TR-25
SSTs (Special Service Tools)	TR-26

OUTLINE

SECTIONAL VIEW OF TRANSFER



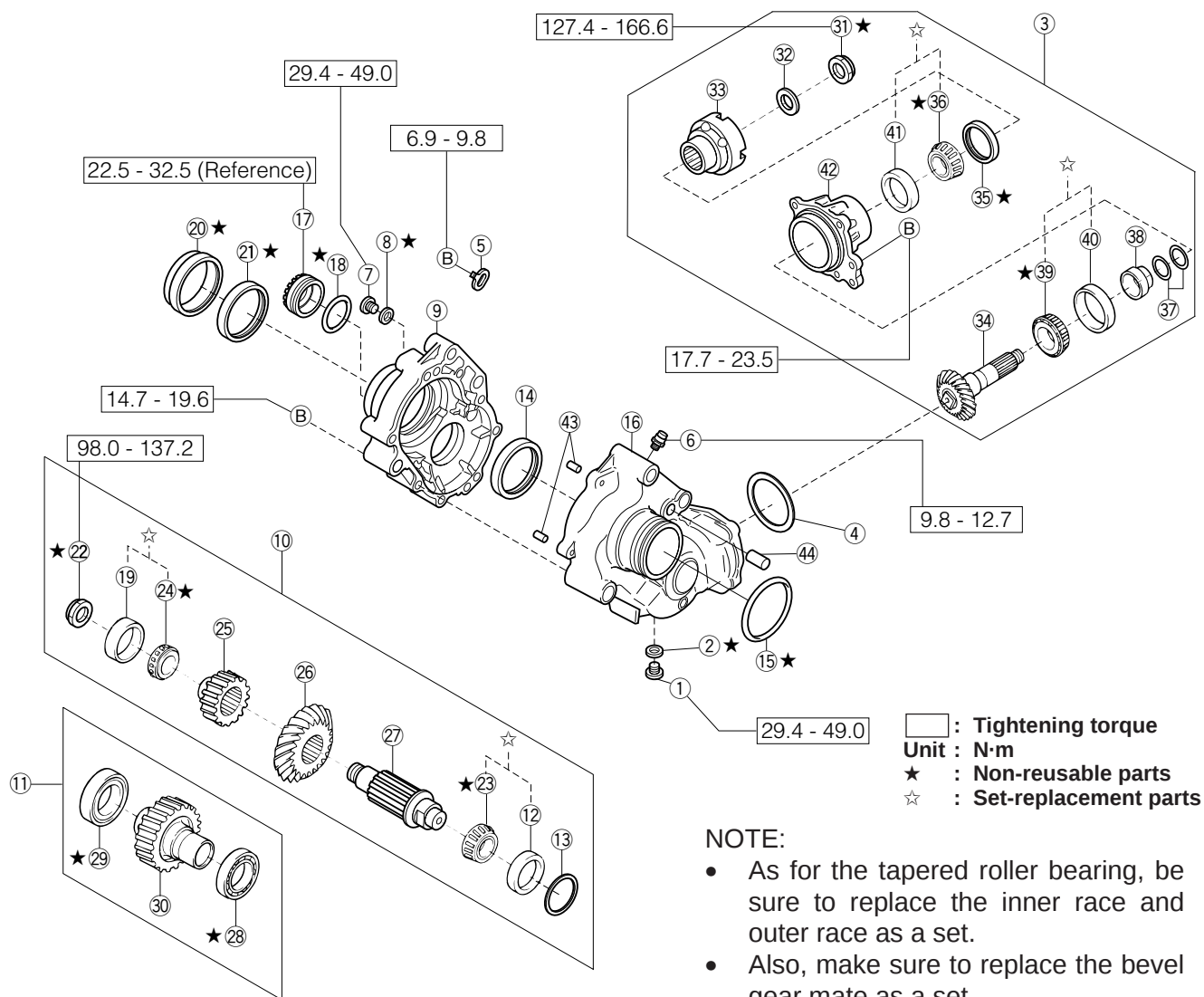
MTR00002-00001

SPECIFICATIONS

Item		Specifications		
Type of transfer		T1E-N1		
Gear ratio and Number of teeth		Number of teeth		Gear ratio
Transfer	Helical gear	Drive	41	0.707
		Driven	29	
	Bevel gear	Drive	37	0.459
		Driven	17	
Rear differential (Reference)	Bevel gear	Drive	13	3.077
		Driven	40	
Total gear ratio				1.000
Fluid to be used		SAE 75W-85, API GL-5		
Full capacity		0.4 liter		

MTR00003-00000

COMPONENTS



- ① Drain plug
- ② Gasket
- ③ Output shaft bearing front retainer S/A
- ④ Shim
- ⑤ Transfer bearing adjusting nut lock plate
- ⑥ Breather plug
- ⑦ Filler plug
- ⑧ Gasket
- ⑨ Transfer case cover
- ⑩ Transfer output gear S/A
- ⑪ Transfer input gear S/A
- ⑫ Tapered roller bearing (outer race)
- ⑬ Shim
- ⑭ Type D oil seal
- ⑮ O-ring
- ⑯ Transfer case
- ⑰ Transfer bearing adjusting cover
- ⑱ O-ring
- ⑲ Tapered roller No. 2 bearing (outer race)
- ⑳ Type T oil seal
- ㉑ Type D oil seal
- ㉒ Nut

- ㉓ Tapered roller bearing
- ㉔ Tapered roller No. 2 bearing
- ㉕ Transfer output gear
- ㉖ Transfer bevel gear
- ㉗ Transfer output shaft
- ㉘ Radial ball bearing
- ㉙ Radial ball bearing
- ㉚ Transfer input gear
- ㉛ Nut
- ㉜ Conical spring washer
- ㉝ Transfer output shaft flange
- ㉞ Transfer output front shaft
- ㉟ Type T oil seal
- ㊱ Tapered roller No. 1 bearing
- ㊲ Shim
- ㊳ Spacer
- ㊴ Tapered roller No. 3 bearing
- ㊵ Tapered roller No. 3 bearing (outer race)
- ㊶ Tapered roller No. 1 bearing (outer race)
- ㊷ Output shaft bearing front retainer
- ㊸ Knock pin (small)
- ㊹ Knock pin (large)

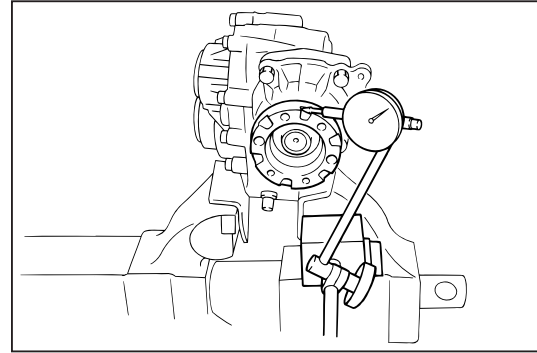
TRANSFER

PRELIMINARY INSPECTION

1. Inspection of Backlash

- (1) Remove the drain plug and gasket from the transfer case subassembly.
- (2) Secure the transfer on a vice table.
- (3) Insert a cross-recessed head screwdriver into the drain plug hole to secure the bevel gear. Then, check the backlash of the transfer bevel gear, using a dial gauge.

Specified Value: 0.08 - 0.18 mm



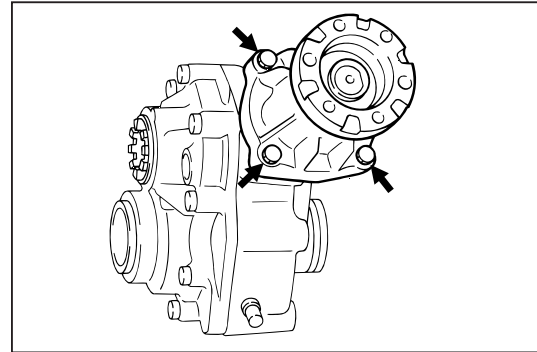
MTR00005-00003

NOTE:

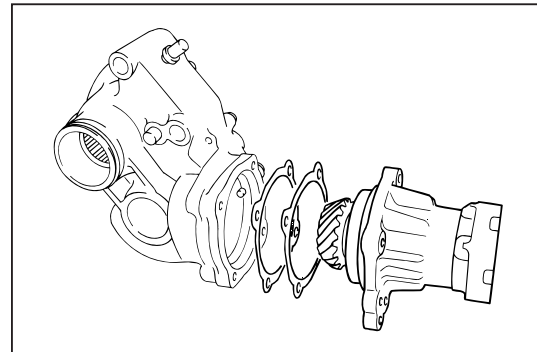
- In cases where the backlash fails to conform to the specified value, write down the value to be used as a reference during the assembling.

2. Inspection of Preload

- (1) Remove the output shaft bearing front retainer sub-assembly and shim from the transfer case assembly by removing the four bolts.



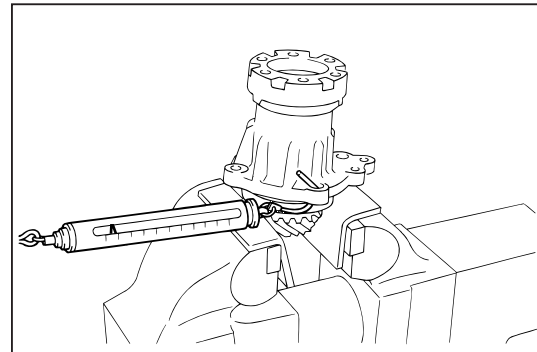
MTR00006-00004



MTR00000-00005

- (2) Measure the preload of the transfer output front shaft, using a spring scale.

Specified Value: 7.8 - 15.6 N



MTR00007-00006

NOTE:

- When securing the gear section in a vice, be very careful not to damage the gear section. The gear section should be held lightly.
- In cases where the preload fails to conform to the specified value, write down the value to be used as a reference during the assembling.

3. Inspection of Tooth Contact

- (1) Apply red lead to the tooth surface of the transfer bevel gear. Then, assemble the output shaft bearing front retainer subassembly and shims to be used.

Tightening Torque: 17.7 - 23.5 N·m

- (2) Turn the output shaft flange clockwise and counter clockwise.

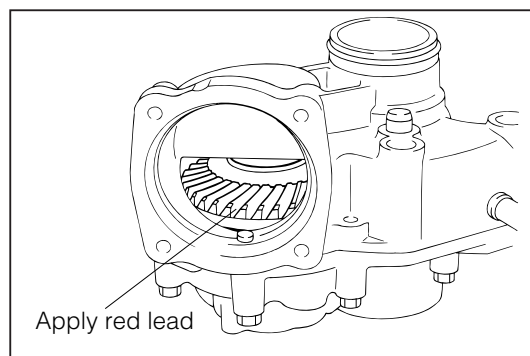
- (3) Remove the output shaft bearing front retainer sub-assembly and shims again and check the tooth contact between the transfer bevel gear and the transfer front output shaft.

NOTE:

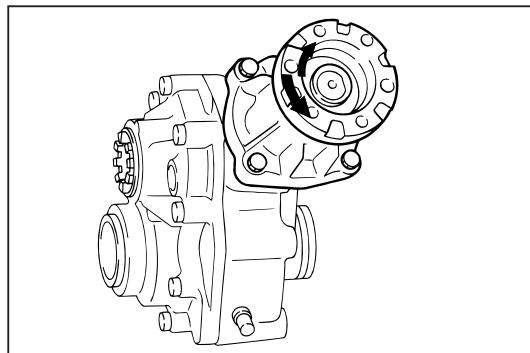
- In cases where the tooth contact fails to conform to the right figure, write down the thickness of shims to be used as a reference during the assembling.

REMOVAL

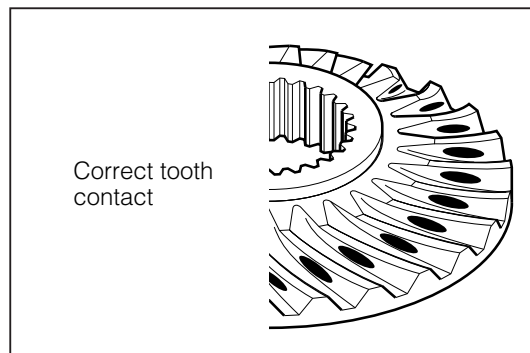
1. Remove the output shaft bearing front retainer subassembly and shim from the transfer case subassembly by removing the four bolts.



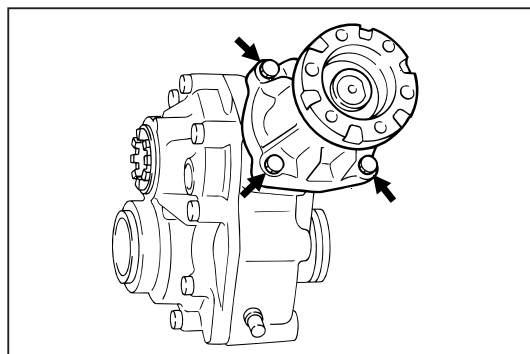
MTR00008-00007



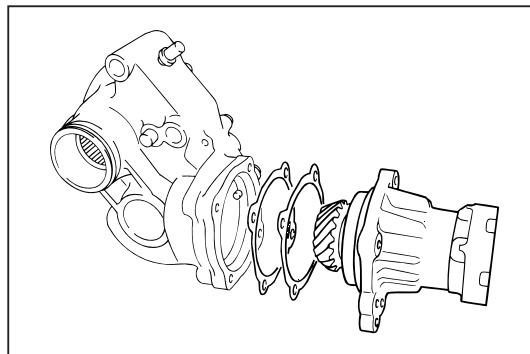
MTR00009-00008



MTR00093-00096

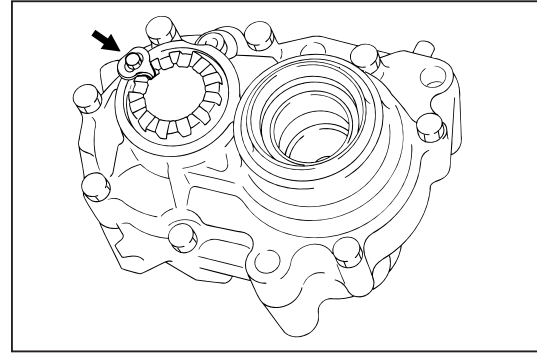


MTR00010-00009



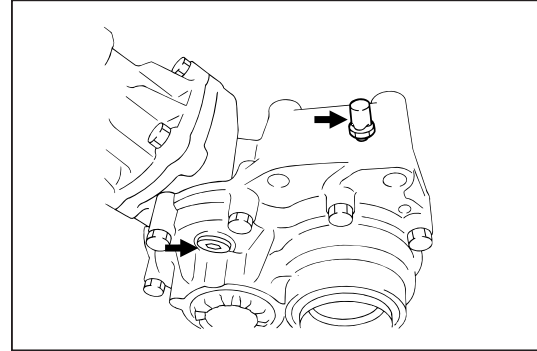
MTR00000-00010

2. Remove the transfer bearing adjusting nut lock plate by removing the bolt.



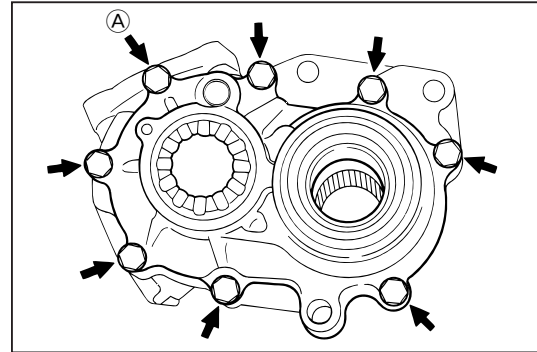
MTR00011-00011

3. Remove the breather plug, filler plug and gasket.



MTR00012-00012

4. Remove the eight bolts from the transfer case cover side.

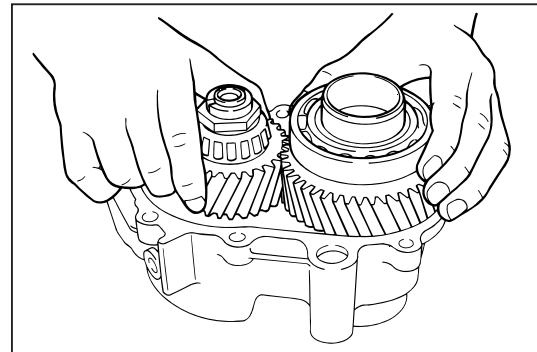


MTR00013-00013

5. Remove the transfer case cover while lightly applying impact, using a plastic hammer.
6. Remove the transfer output gear subassembly and transfer input gear subassembly at the same time.

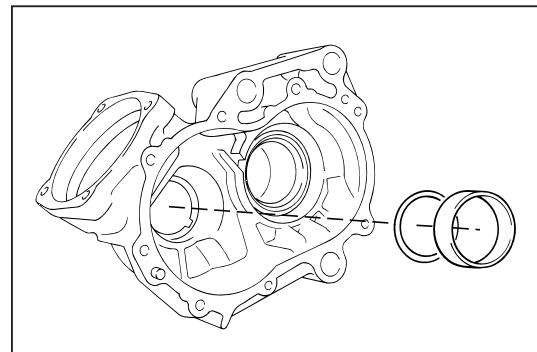
NOTE:

- If any difficulty is encountered in removing these parts due to slippery fingers, put on gloves.



MTR00014-00014

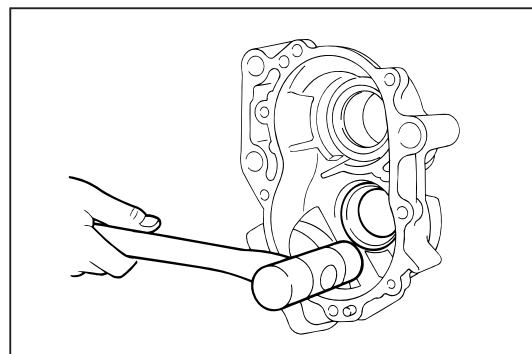
7. Remove the outer race of the tapered roller bearing and shim from the transfer case with the index fingers of your both hands.



MTR00015-00015

NOTE:

- If any difficulty is encountered in removing these parts with your fingers, lightly apply impact, using a plastic hammer, as indicated in the right figure, to remove the parts.

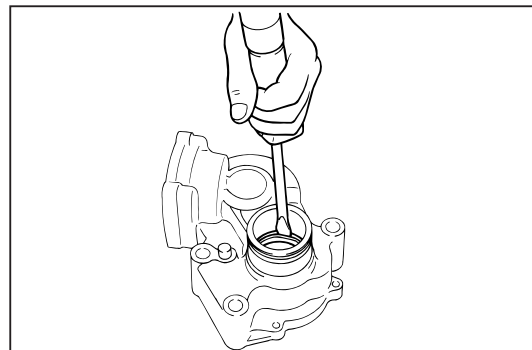


MTR00016-00016

8. Remove the Type D oil seal and O-ring from the transfer case, using a flat screwdriver.

NOTE:

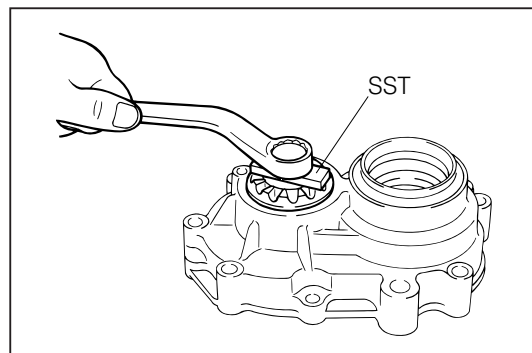
- Never reuse the oil seal and O-ring.



MTR00017-00017

9. Remove the knock pin (small) and knock pin (large).
10. Remove the transfer bearing adjusting cover from the transfer case cover, using the following SST.

SST: 09351-87217-000

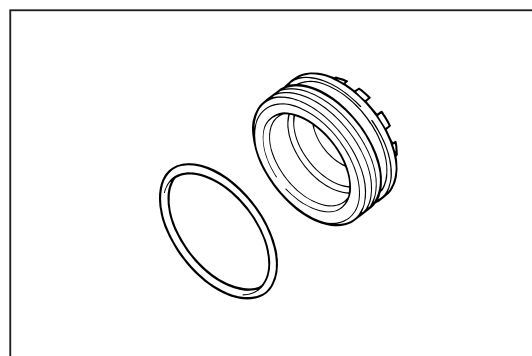


MTR00018-00018

11. Remove the O-ring from the transfer bearing adjusting cover.

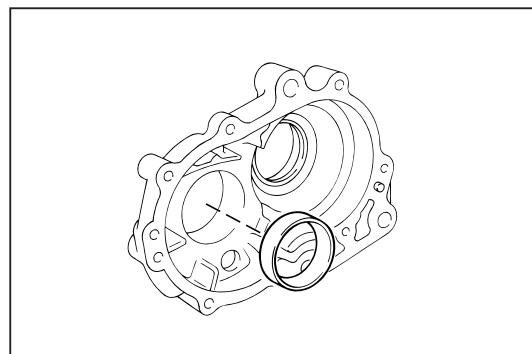
NOTE:

- Never reuse the O-ring.



MTR00019-00019

12. Remove the outer race of the tapered roller bearing No. 2 from the transfer case cover.

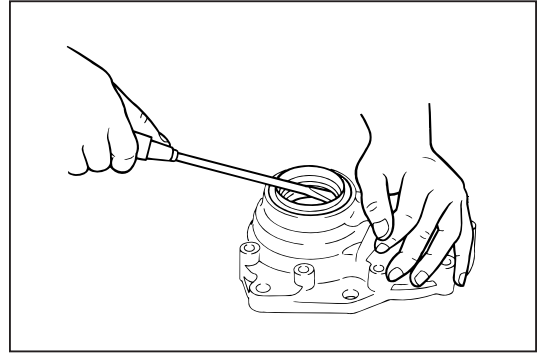


MTR00020-00020

13. Remove the Type T oil seal from the transfer case cover, using a flat screwdriver.

NOTE:

- Never reuse the oil seal.

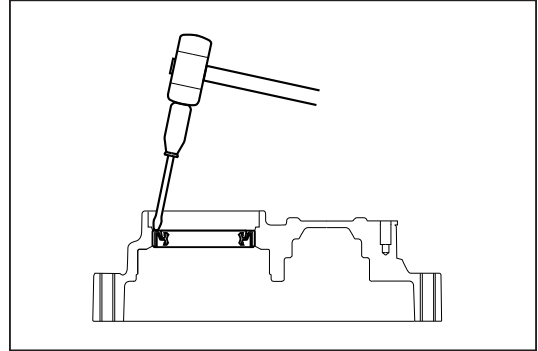


MTR00021-00021

14. Remove the Type D oil seal from the transfer case cover, using a flat screwdriver in combination with a hammer.

NOTE:

- Never reuse the oil seal.



MTR00022-00022

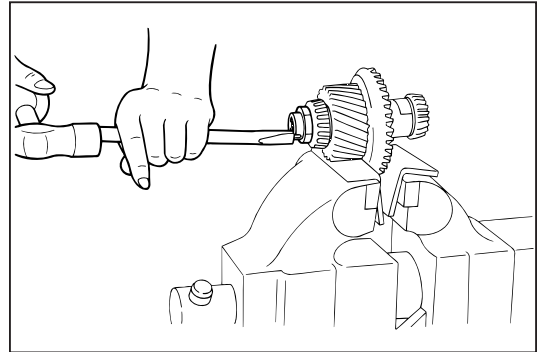
TRANSFER OUTPUT GEAR SUBASSEMBLY

Disassembly

1. Secure the transfer bevel gear in a vice with aluminum sheets interposed.

NOTE:

- Be sure to secure the side part (flat section) of the bevel gear. Be very careful not to damage the tooth section.

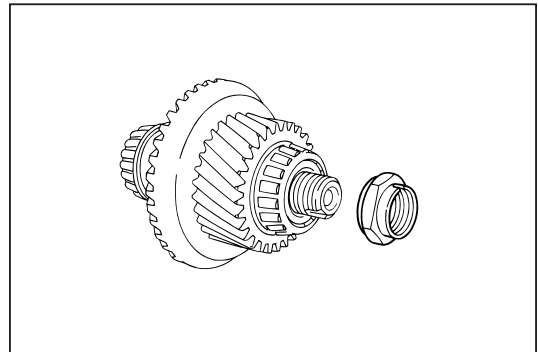


MTR00023-00023

2. Remove the staked portion of the nut, using a chisel in combination with a hammer.
3. Remove the nut.

NOTE:

- Never reuse the nut.



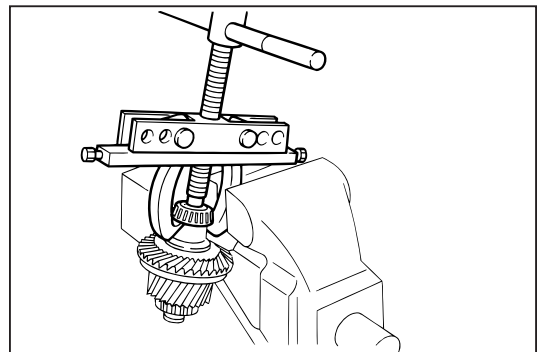
MTR00024-00024

4. Remove the tapered roller bearing, using a vice in combination with the following SST.

SST: 09950-20017-000

NOTE:

- Be very careful not to drop the output gear.
- Never reuse the tapered roller bearing.
(If the tapered roller bearing is removed, replace the inner race and outer race with new ones as a set.)



MTR00025-00025

- Remove the tapered roller bearing No. 2, transfer output gear, transfer bevel gear and transfer output shaft, respectively, using a press in combination with the following SSTs.

SST: ① 09506-87304-000

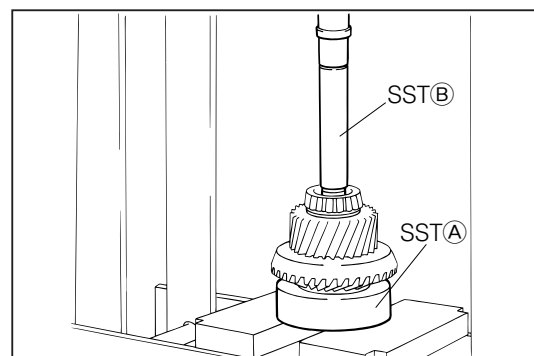
② 09950-20017-000

NOTE:

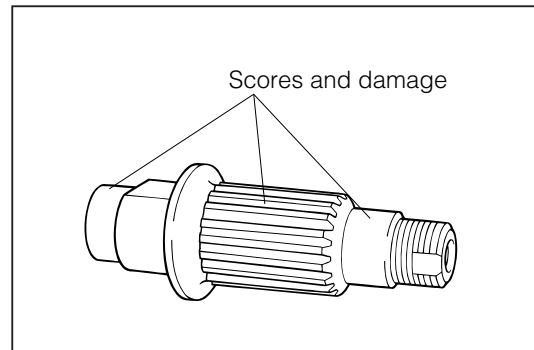
- Never reuse the tapered roller bearing No. 2.
(If the tapered roller bearing No. 2 is removed, replace the inner race and outer race with new ones as a set.)

Inspection

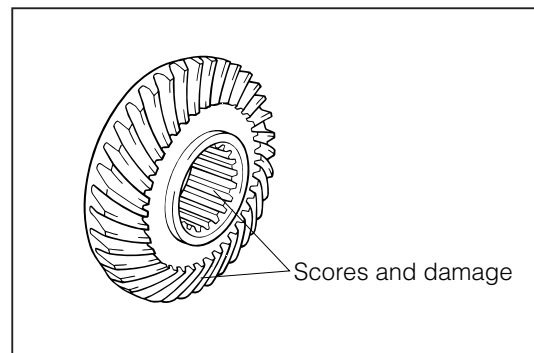
- Check the transfer output shaft spline and roller bearing press-fitting section for scores and damage.
- Check the transfer bevel gear tooth surface and spline for scores and damage.
- Check the transfer output gear tooth surface and spline section for scores and damage.



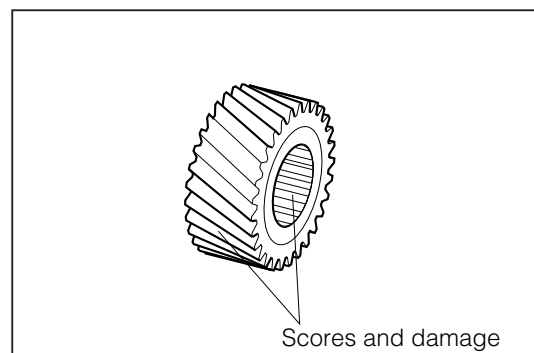
MTR00026-00026



MTR00027-00027



MTR00028-00028



MTR00029-00029

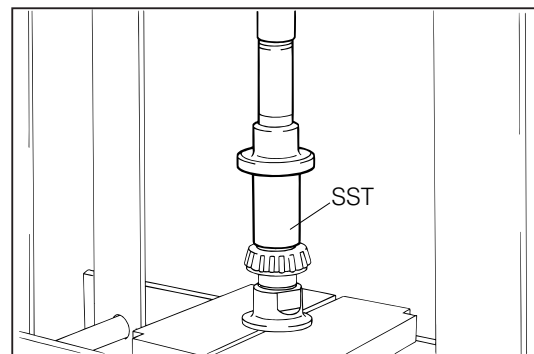
Assembly

- Press-fit the new tapered roller bearing (inner race) into the transfer output shaft, using the following SST in combination with a press.

SST: 09325-12010-000

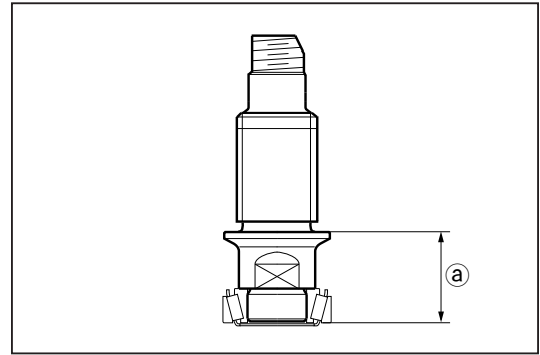
NOTE:

- The tapered roller bearing comes in two kinds, large one and small one. Be sure to press-fit the small bearing into the transfer bevel gear side. (The inner diameter is 25 mm and the same for the large and small bearings.)



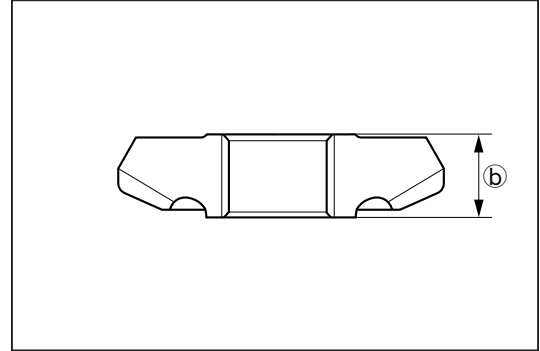
MTR00031-00031

2. Assemble the tapered roller bearing (inner race) that has been assembled in Step 1 above with the tapered roller bearing (outer race). Measure the dimension ① in the right figure, using vernier calipers or a micrometer, and record the measured value.



MTR00032-00032

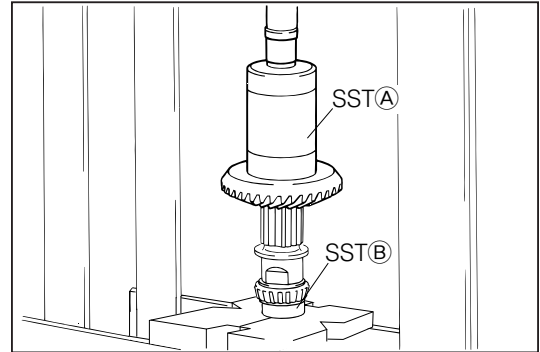
3. Assemble the transfer bevel gear.
 - (1) Measure the dimension ② of the transfer bearing in the right figure, using vernier calipers or a micrometer, and record the measured value.



MTR00033-00033

- (2) Press-fit the transfer bevel gear, using the following SSTs in combination with a press.

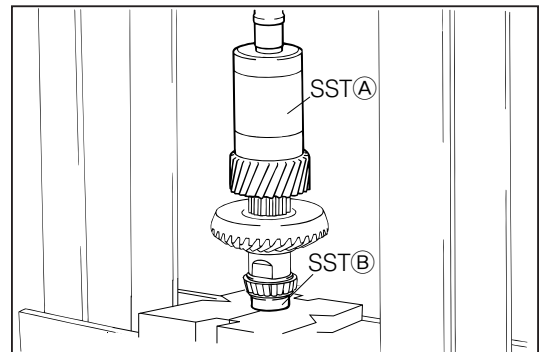
SST: ① 09635-20010-000
 ② No. 5 of 09608-87501-000



MTR00034-00034

4. Assemble the transfer output gear, using the following SSTs in combination with a press.

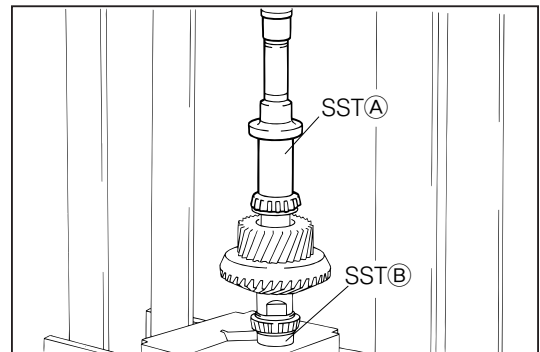
SST: ① 09635-20010-000
 ② No. 5 of 09608-87501-000



MTR00035-00035

5. Press-fit the new tapered roller bearing No. 2, using the following SSTs in combination with a press.

SST: ① 09325-12010-000
 ② No. 5 of 09608-87501-000



MTR00036-00036

NOTE:

- The tapered roller bearing comes in two kinds, large one and small one. Be sure to press-fit the large bearing into the transfer output gear side. (The inner diameter is 25 mm and the same for the large and small bearings.)

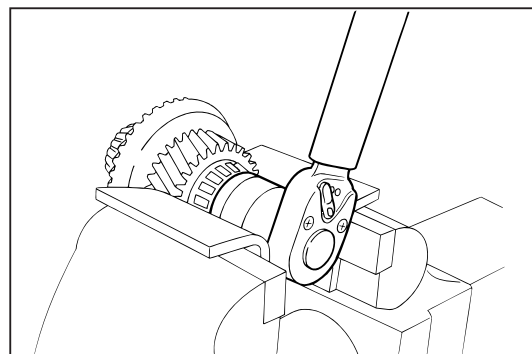
6. Assemble a new nut.
7. Secure the transfer output gear subassembly in a vice table with aluminum sheets interposed. Tighten the nut to the specified torque.

Tightening Torque: 98.0 - 137.2 N·m

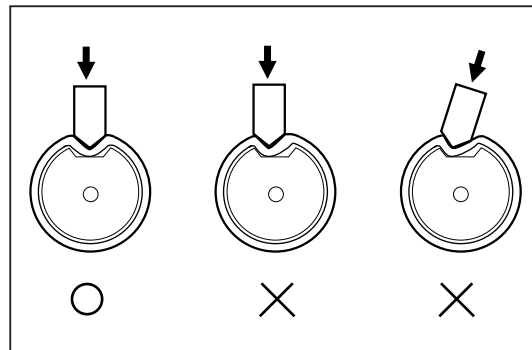
NOTE:

- Be very careful not to damage the tooth section of the output gear when securing the assembly in the vice.

8. Positively stake the lock section of the nut into the groove bottom of the shaft.



MTR00037-00037



MTR00038-00038

TRANSFER INPUT GEAR SUBASSEMBLY

Disassembly

1. Remove the radial ball bearing, using a press, the SST's.
2. Remove the radial ball bearing at the opposite side from the transfer input gear in the same way as Step 1 above.

SST: Ⓐ 09517-12010-000

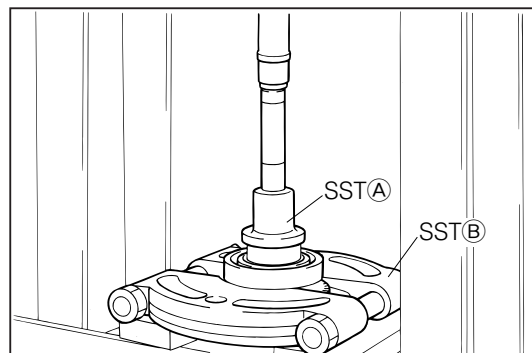
Ⓑ 09950-87701-000

NOTE:

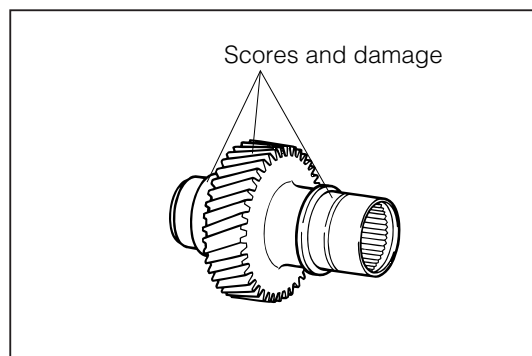
- Never reuse the removed radial ball bearing.

Inspection

1. Check the transfer input gear tooth surface and bearing press-fitting section for scores and damage.



MTR00039-00039



MTR00040-00040

Assembly

1. Press-fit new radial ball bearings into the transfer input gear, using the following SSTs in combination with a press.

SST: 09635-20010-000

09607-87602-000

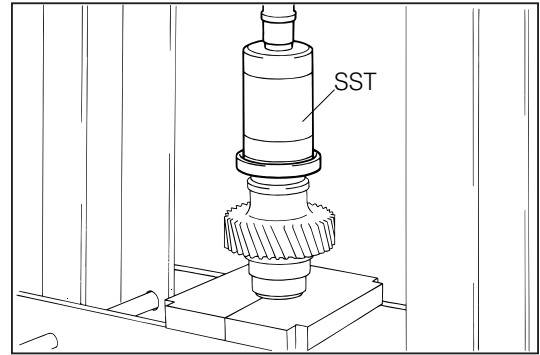
NOTE:

- The radial ball bearing comes in two kinds, large one and small one. Be sure to press-fit the respective bearings whose inner diameter matches the outer diameter of the transfer input gear. (Two kinds of 45 mm diameter and 50 mm diameter)

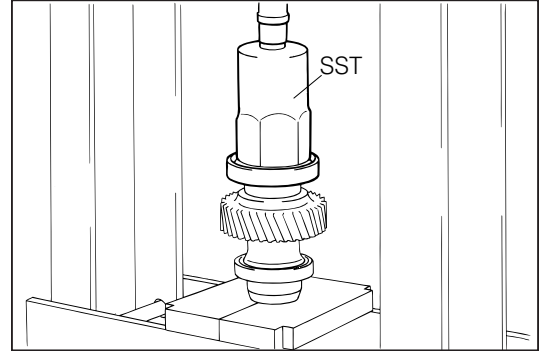
The radial ball bearing (small) is provided with a seal. Be sure to assemble the bearing in such a way that the seal side comes at the gear side (inside).

The SST (09635-20010-000) should be used when press-fitting the small bearing (inner diameter 45 mm).

The SST (09607-87602-000) should be used when press-fitting the large bearing (inner diameter 50 mm).



MTR00041-00041



MTR00000-00042

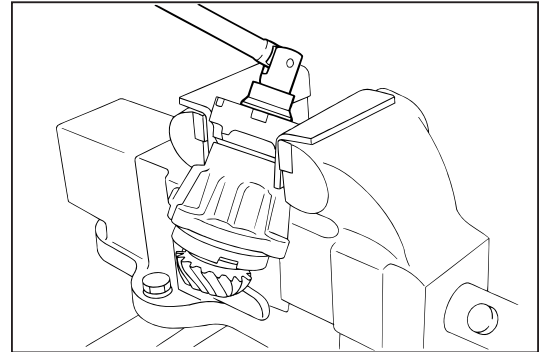
FRONT BEARING RETAINER SUBASSEMBLY

Disassembly

1. Remove the staked portion of the nut, using a chisel in combination with a hammer. Then, remove the nut.

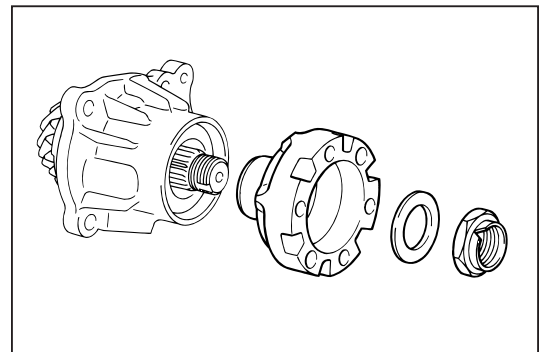
NOTE:

- Never reuse the nut.



MTR00042-00043

2. Remove the conical washer and transfer output shaft flange.

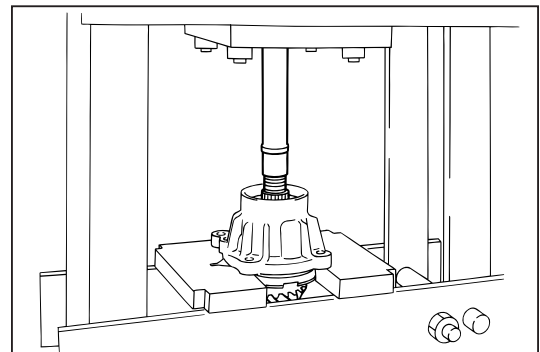


MTR00043-00044

3. Remove the transfer output front shaft, using a press.

NOTE:

- Be very careful not to drop the transfer output front shaft.

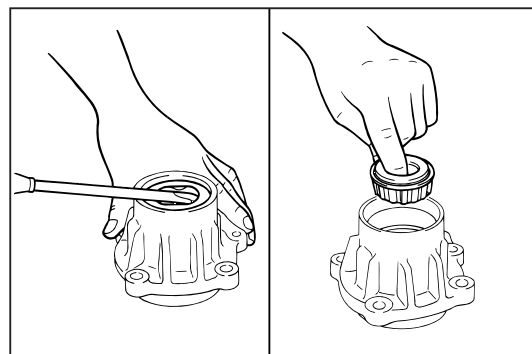


MTR00044-00045

4. Remove the Type T oil seal, using a flat screwdriver. Then, remove the tapered roller bearing No. 1.

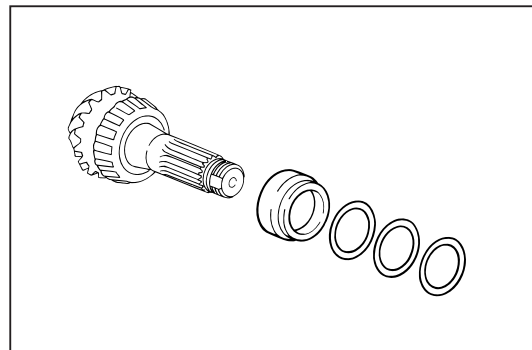
NOTE:

- Never reuse the Type T oil seal.
- Never reuse the tapered roller bearing No. 1.
(If the tapered roller bearing No. 1 is removed, replace the inner race and outer race with new ones as a set.)



MTR00045-00046

5. Remove the shims and the spacer.



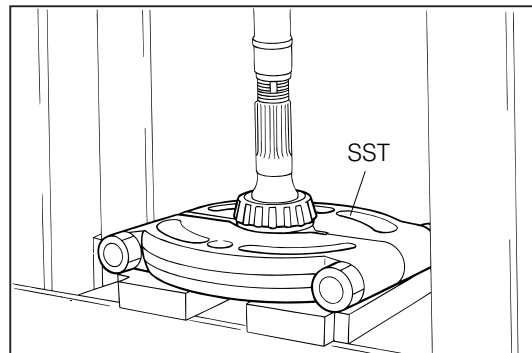
MTR00046-00047

6. Remove the tapered roller bearing No. 3 from the transfer output front shaft, using SST in combination with a press.

SST: 09950-87701-000

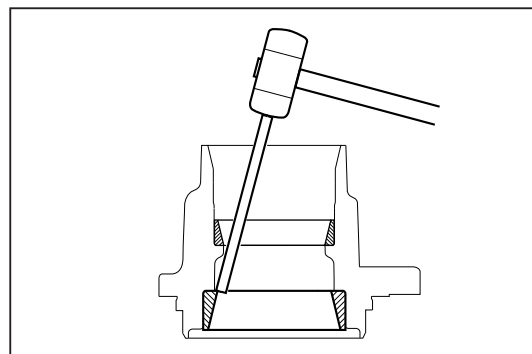
NOTE:

- Never reuse the tapered roller bearing No. 3.
(If the tapered roller bearing No. 3 is removed, replace the inner race and outer race with new ones as a set.)



MTR00047-00048

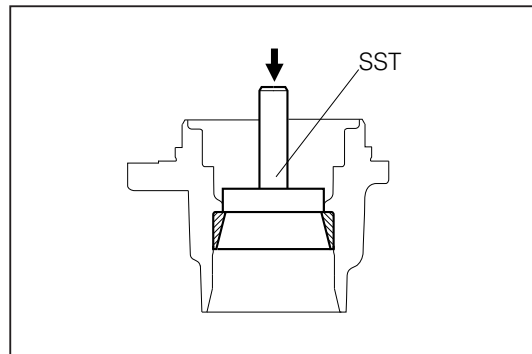
7. Remove the outer race of the tapered roller bearing No. 3, using a plastic hammer in combination with a brass bar.



MTR00048-00049

8. Remove the outer race of the tapered roller bearing No. 1, using the following SST in combination with a press.

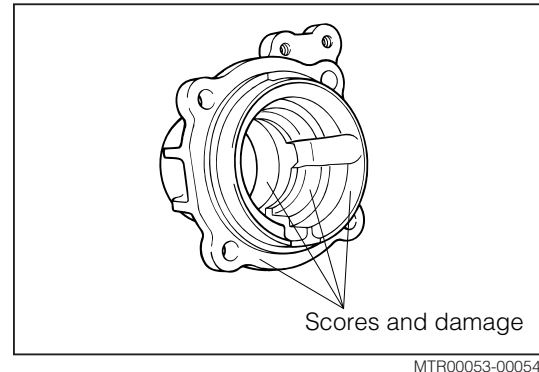
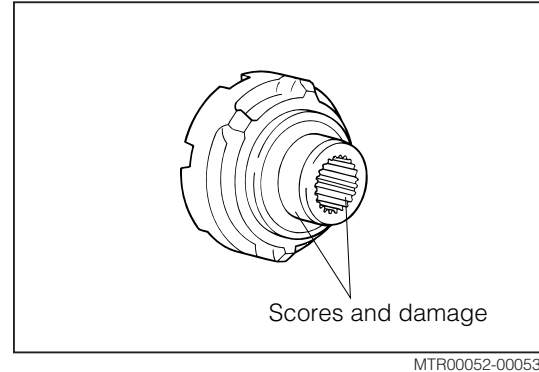
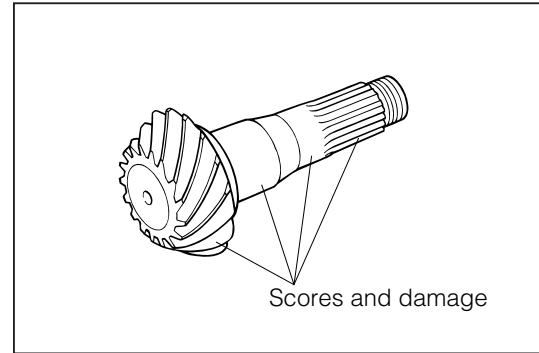
SST: No. 5 of 09608-87501-000



MTR00049-00050

Inspection

1. Check the transfer output front shaft tooth surface, spline and roller bearing press-fitting section for scores and damage.
2. Check the transfer output shaft flange spline section and oil seal fitting section for scores and damage.
3. Check the bearing attaching section of the output shaft bearing front retainer and assembling surface with other cases for scores and damage.



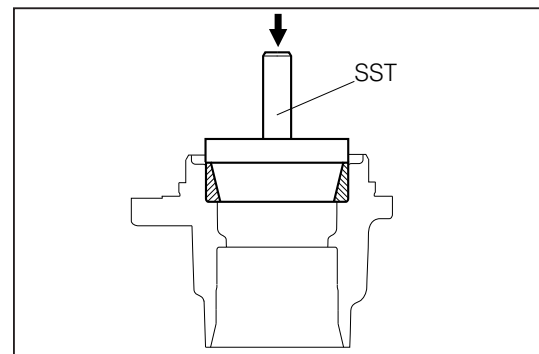
Assembly

1. Press-fit the outer race of the tapered roller bearing No. 3, using the following SST in combination with a press.

SST: No. 8 of 09608-87501-000

NOTE:

- When the inner race is replaced with a new one, be sure to replace the outer race, too, with a new one.

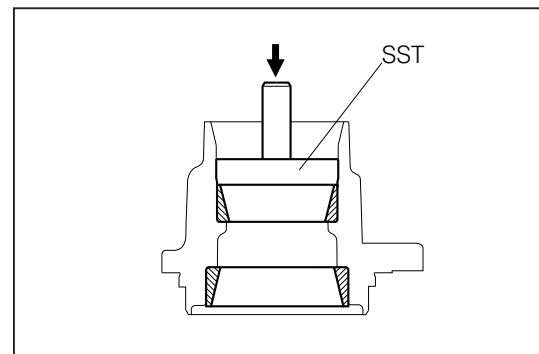


2. Press-fit the outer race of the tapered roller bearing No. 1, using the following SST in combination with a press.

SST: No. 7 of 09608-87501-000

NOTE:

- When the inner race is replaced with a new one, be sure to replace the outer race, too, with a new one.

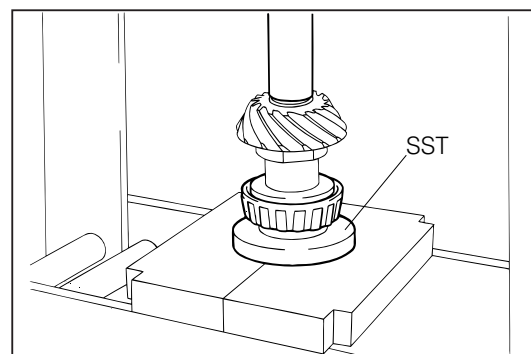


3. Press-fit the new tapered roller bearing No. 3 into the transfer output front shaft, using the following SST in combination with a press.

SST: No. 11 of 09608-12010-000

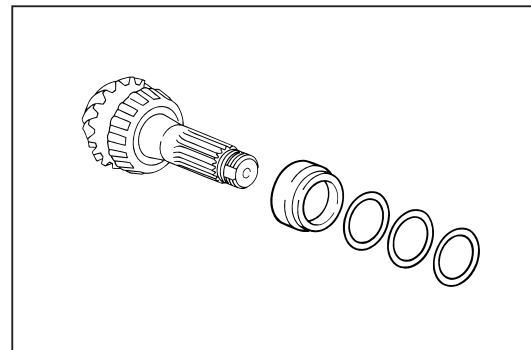
NOTE:

- Be sure to apply gear oil to the transfer output front shaft before the press-fitting.



MTR00056-00057

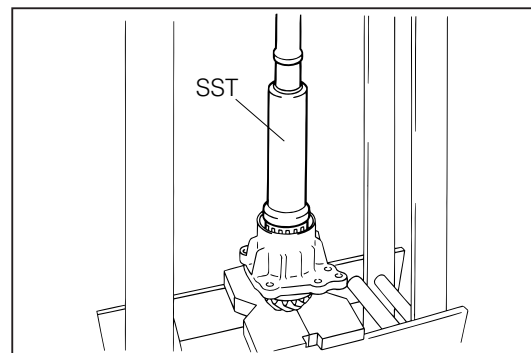
4. Assemble the spacer and all shims that have been removed during the disassembling.



MTR00057-00058

5. Assemble the transfer output front shaft to the output shaft bearing front retainer. Then, press-fit the new tapered roller bearing No. 1, using the following SST in combination with a press.

SST: 09309-87201-000



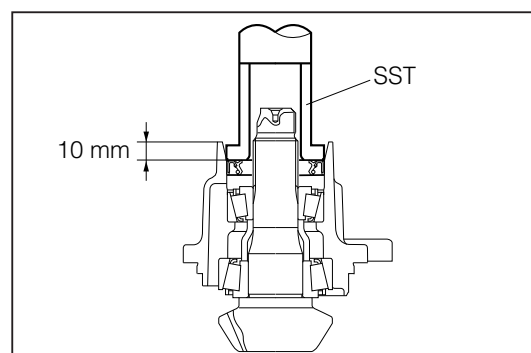
MTR00058-00059

6. Press-fit a new Type T oil seal into the output shaft bearing front retainer, using the following SST in combination with a press.

SST: 09309-87201-000

NOTE:

- Press-fitting should be performed, until the upper surface of the oil seal is aligned with the chamfered section of the case. (Approx. 10 mm from the upper surface of the case) Be sure to apply MP grease to the entire periphery of the lip section of the oil seal.

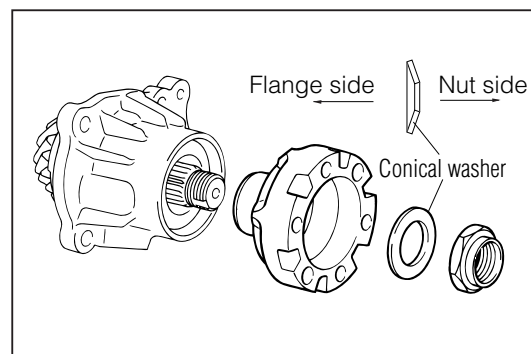


MTR00059-00060

7. Assemble the transfer output shaft flange, conical washer and the nut.

NOTE:

- Make sure that the conical washer is assembled in the direction indicated in the figure.

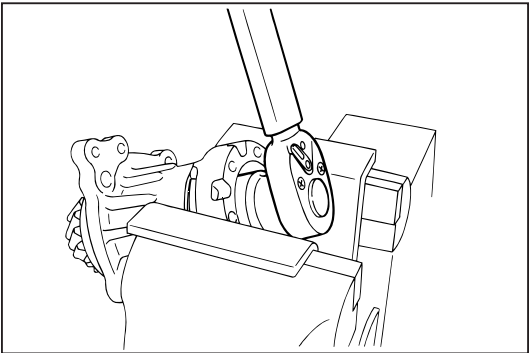


MTR00060-00061

8. Tighten the nut to the specified torque.
Tightening Torque: 127.4 - 166.6 N·m

NOTE:

- Be sure to stake the nut after the preload has been confirmed.

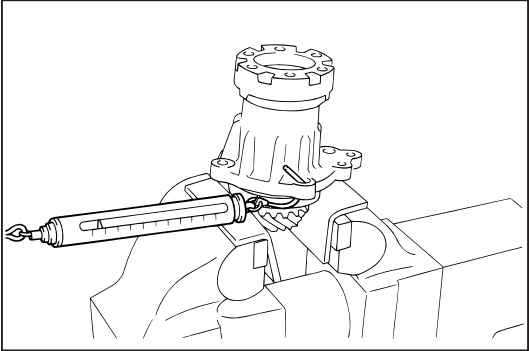


MTR00061-00062

9. Measure the preload.
- (1) Clamp the transfer output front shaft in a vice with aluminum sheets interposed, as indicated in the right figure. Attach a spring scale to the attaching hole of the retainer and pull the spring scale. Measure the load at the time when the retainer starts to move.
- Specified Value: 7.8 - 15.6 N

NOTE:

- Be sure to lightly clamp the front shaft section in a vice. Care must be exercised not to damage the tooth section.



MTR00062-00063

- (2) If the measured value fails to conform to the specified value, replace the shim.

NOTE:

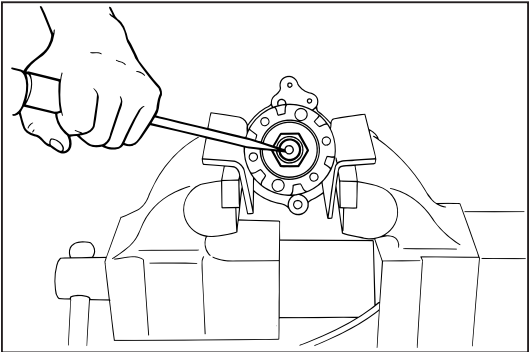
- In cases where the preload is less than the specified value, select a shim thinner than the one assembled. In cases where the preload exceeds the specified value, select a shim thicker than the one assembled.

Thickness (mm)	Part number (reference)
0.20	90045-64236-000
0.25	90045-64238-000
0.28	90045-64239-000
0.30	90045-64240-000
0.50	90045-64242-000

REFERENCE:

- The part numbers above are posted here for your reference. It is requested to make confirmation, referring to the parts list.

10. Stake the nut, using a flat screwdriver in combination with a hammer.



MTR00063-00064

11. Select a protruding shim of the transfer output front shaft (for adjusting the tooth contact), following the procedure given below.

- (1) Place the transfer output front shaft with its gear section facing downward on a surface table or a flat glass plate.
- (2) Measure the dimension from the edge surface of the gear section to the front bearing retainer surface (section © in the right figure), using vernier calipers. Record the measured value.
- (3) Select a protruding shim of the transfer output front shaft ④, using the following formula.

$$\textcircled{t} = 61 + \textcircled{C} - 29 - 79.3$$

④ = Thickness of shim to be selected

79.3 = Dimension from edge surface of transfer case to transfer output gear center (reference value)

C = Dimension from edge surface at head of transfer output front shaft to front bearing retainer surface (shim attaching surface)

29 = Dimension of gear section of transfer output front shaft

61 = Ideal protruding amount of transfer output front shaft

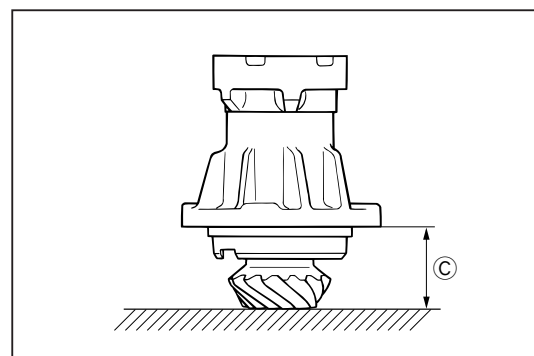
Thickness (mm)	Part number (reference)
0.20	90045-65066-000
0.25	90045-65067-000
0.30	90045-65068-000
0.35	90045-65069-000
0.40	90045-65070-000
0.45	90045-65071-000

REFERENCE:

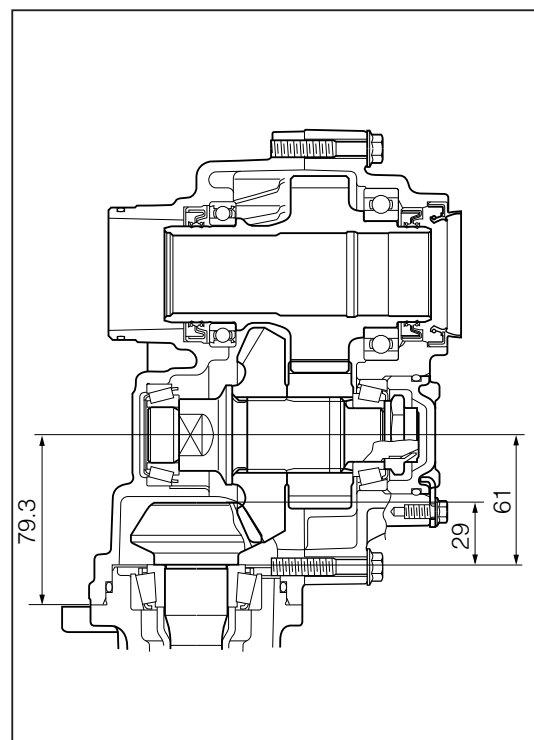
- The part numbers above are posted here for your reference. It is requested to make confirmation, referring to the parts list.

NOTE:

- The above formula shows a simplified shim selecting method. Therefore, after confirming the gear contacting condition, it is necessary to increase or decrease the shim, as required.



MTR00064-00065

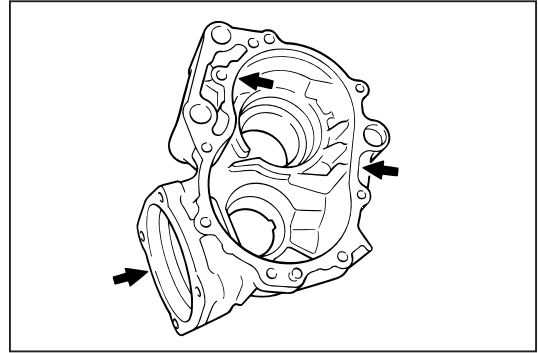


MTR00065-00066

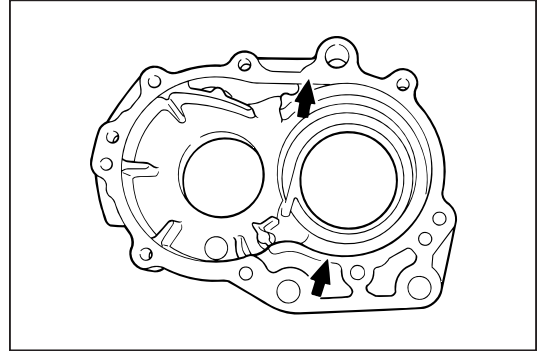
INSPECTION

Transfer case and case cover

1. Check the respective mating surfaces of the transfer case and case cover for scores and damage. Also, wipe off any residual bond.

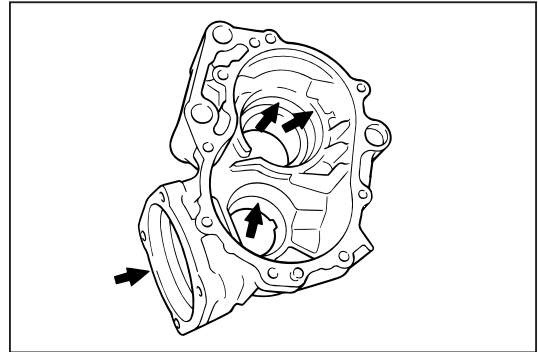


MTR00066-00067

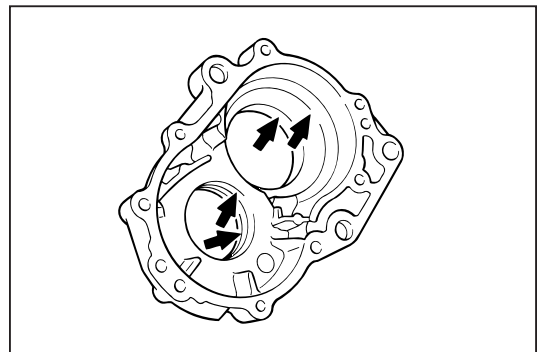


MTR00000-00068

2. Check the bearing attaching sections and oil seal attaching sections of the transfer case and transfer case cover for scores and damage.



MTR00067-00069



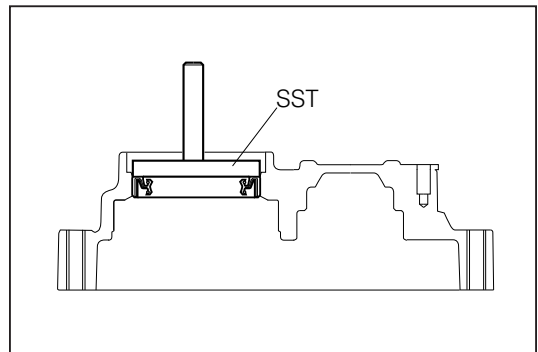
MTR00000-00070

ASSEMBLY

1. Assemble a new Type D oil seal to the transfer case cover, using the following SST in combination with a press.
SST: 09351-32150-000

NOTE:

- Press-fitting should be performed, until the upper surface of the oil seal is aligned with the chamfered section of the case. (12 mm from the upper surface of the case)



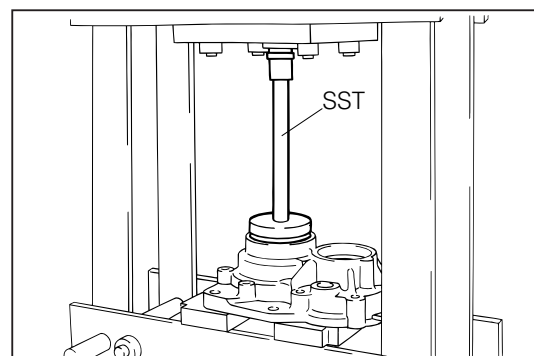
MTR00068-00071

2. Press-fit a new Type T oil seal into the transfer case cover, using the following SST.

SST: 09517-87203-000

NOTE:

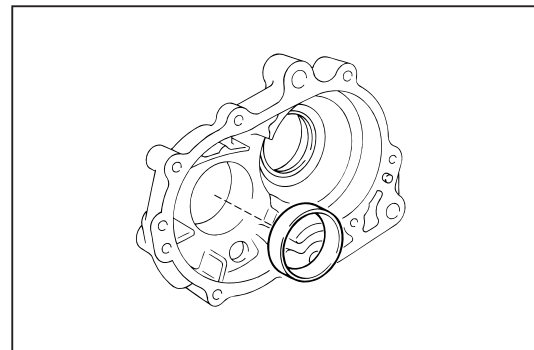
- Be sure to apply MP grease to the entire periphery of the lip section of the oil seal that has been press-fitted in Steps 1 and 2 above.



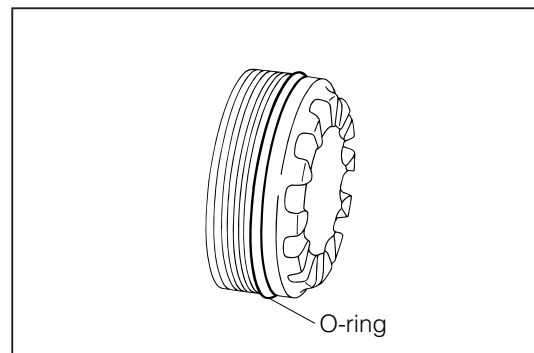
3. Assemble the outer race of the tapered roller bearing No. 2 to the transfer case cover.

NOTE:

- When the inner race is replaced with a new one, be sure to replace the outer race, too, with a new one.

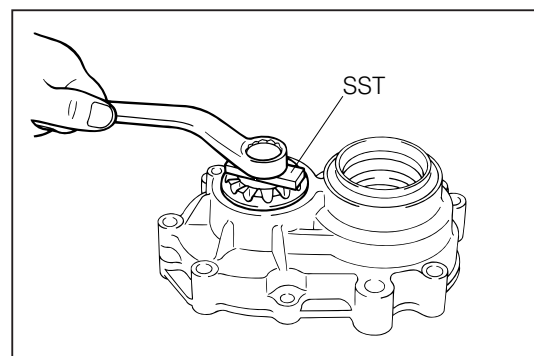


4. Install a new O-ring to the transfer bearing adjusting cover.

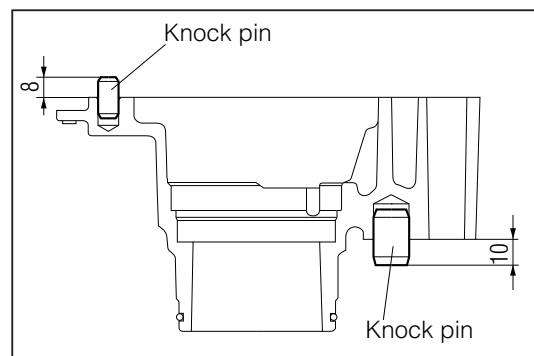


5. Apply gear oil to the entire periphery of the O-ring.
6. Temporarily tighten the transfer bearing adjusting cover, using the following SST.

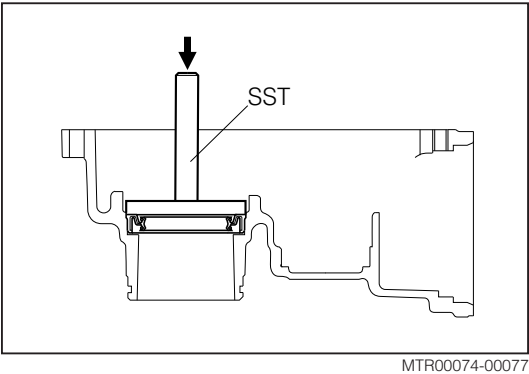
SST: 09351-87217-000



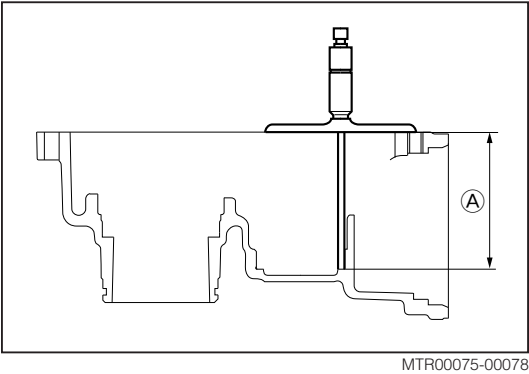
7. Assemble the knock pin (small) and knock pin (large) to the transfer case, using a plastic hammer.



8. Assemble a new Type D oil seal to the transfer case, using the following SSTs.
- SST: Ⓐ 09351-32150-000
 Ⓑ 09506-87302-000



9. Select a protruding shim of the transfer output gear (for adjusting the backlash), following the procedure given below.
- (1) Measure the dimension Ⓐ from the upper surface of the transfer case to the shim attaching surface, using a depth gauge.
- (2) Select a shim of the transfer output gear, using the following formulas.
- Ⓘ = (43 + Ⓐ) – (Ⓑ + 51)
- Ⓘ = Thickness of shim to be selected
- 51 = Dimension from mating surface of transfer case to center of transfer output front shaft



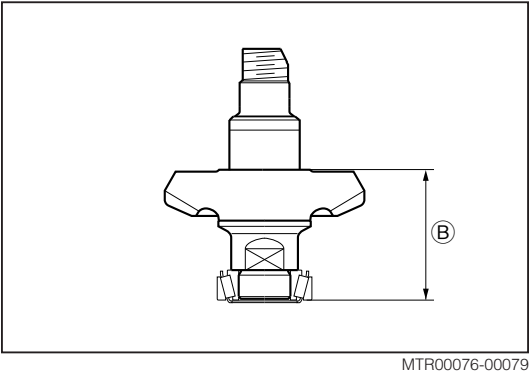
- (Reference)
- Ⓑ = Ⓐ + Ⓑ (Measured in Steps 2 and 3 of page TR-10) (Dimension from edge surface of transfer output bevel gear to edge surface of bearing outer race)
- 43 = Ideal protruding amount of transfer output gear (bevel gear)

- NOTE:
- The above formula shows a simplified shim selecting method. Therefore, after confirming the backlash of the gear, it is necessary to increase or decrease the shim, as required.

- NOTE:
- The thicker the shim, the greater the backlash. Conversely, the thinner the shim, the smaller the backlash.

Thickness (mm)	Part number (reference)
0.20	90045-65085-000
0.25	90045-65084-000
0.30	90045-65086-000
0.35	90045-65087-000
0.40	90045-65088-000

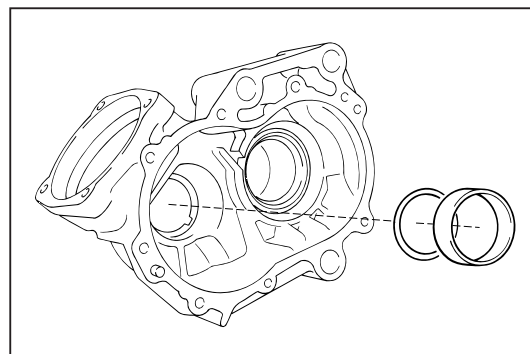
- REFERENCE:
- The part numbers above are posted here for your reference. It is requested to make confirmation, referring to the parts list.



10. Assemble the shim that has been selected in the above step and outer race of the tapered roller bearing to the transfer case.

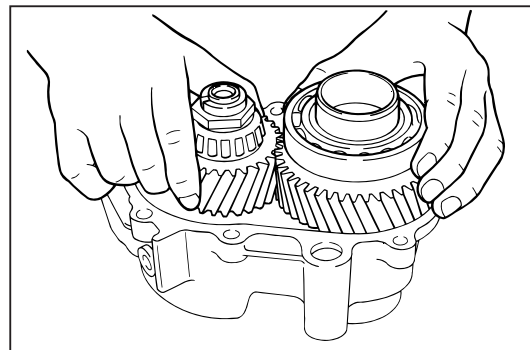
NOTE:

- When the inner race is replaced with a new one, be sure to replace the outer race, too, with a new one.



MTR00077-00080

11. Assemble the transfer output gear subassembly and transfer input gear subassembly to the transfer case at the same time, as indicated in the right figure.

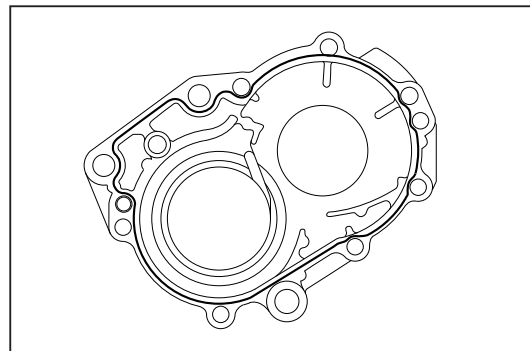


MTR00078-00081

12. Apply the Three Bond 1216 to the entire periphery of the transfer case cover, as indicated in the right figure.

NOTE:

- The bond should be applied after completion of the tooth contact check.
- The bond should be applied without any gap.



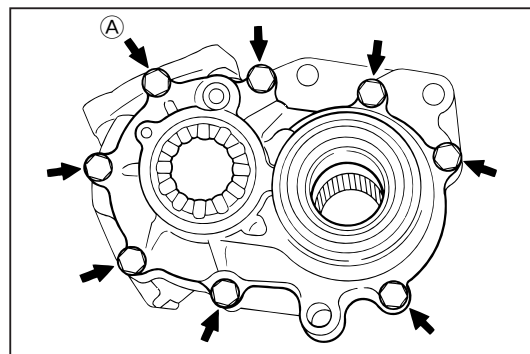
MTR00079-00082

13. Assemble the transfer case cover to the transfer case. Tighten the bolts to the specified torque.

Tightening Torque: 14.7 - 19.6 N·m

NOTE:

- Care must be exercised so that the tapered roller bearing outer race at the transfer case cover side may not be removed.
- Among the attaching bolts, be sure to use a new bolt with locking agent (silver white) (bolt ①).



MTR00080-00083

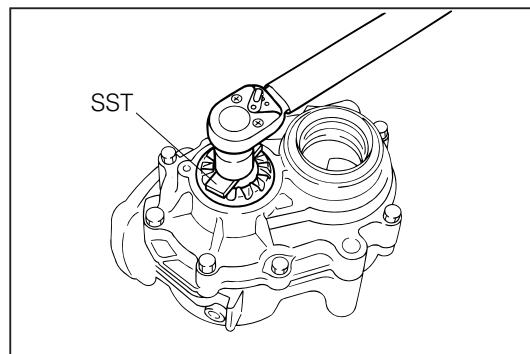
14. Tighten the transfer bearing adjusting cover, that has been temporarily tightened in Step 13 above, to the specified torque, using the following SST.

SST: 09351-87217-000

Tightening Torque: 22.5 - 32.5 N·m

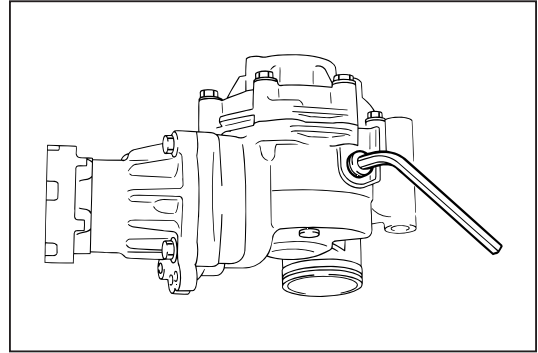
NOTE:

- The preload of the transfer output gear will be set to 0.39 - 0.78 N·m by tightening the cover to the specified torque.



MTR00081-00084

15. Install the breather plug, drain plug and new gasket.
Tightening Torque: 9.8 - 12.7 N·m (Breather plug)
29.4 - 49.0 N·m (Drain plug)



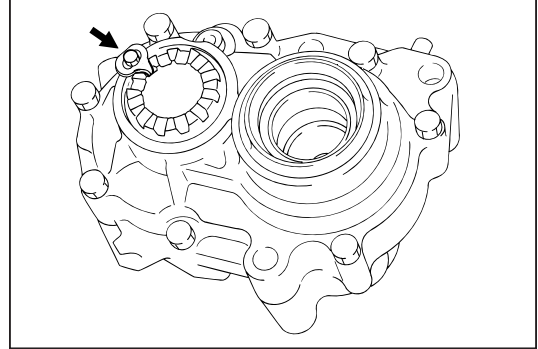
MTR00082-00085

16. Install the transfer bearing adjusting nut lock plate, and tighten the bolt to the specified torque.

Tightening Torque: 6.9 - 9.8 N·m

NOTE:

- In cases where the transfer bearing adjusting cover does not match the nut lock plate, turn the adjusting cover in a tightening direction to install the nut lock plate.



MTR00083-00086

17. Fill the transfer with the specified oil. Tighten the filler plug with the washer interposed.

Specified Oil: SAE 80W-90 API GL-5

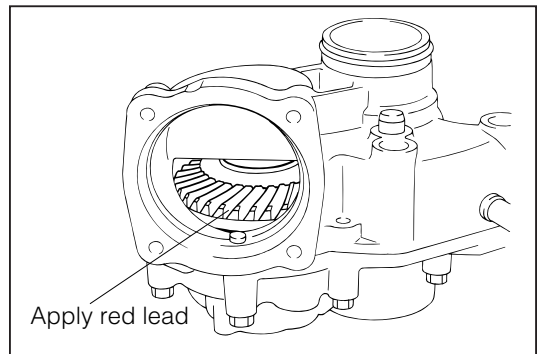
Amount of Oil: 0.4 liter

Tightening Torque: 29.4 - 49.0 N·m

INSPECTION AFTER ASSEMBLING

1. Check of tooth contact

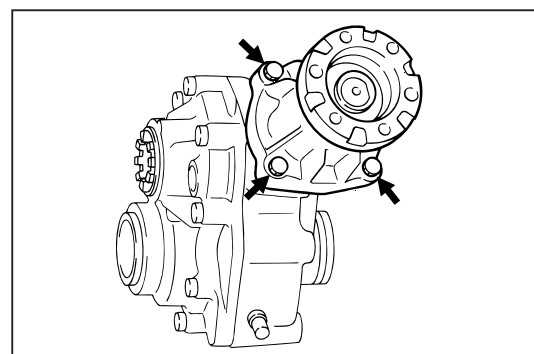
1. Apply red lead to the transfer bevel gear.



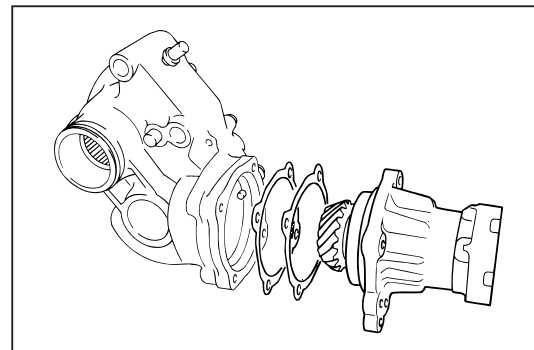
MTR00084-00087

2. Assemble the shim that has been selected in Step 11 of Paragraph 4-9-3 and output shaft bearing front retainer subassembly to the transfer case assembly. Tighten the four bolts to the specified torque.

Tightening Torque: 17.7 - 23.5 N·m

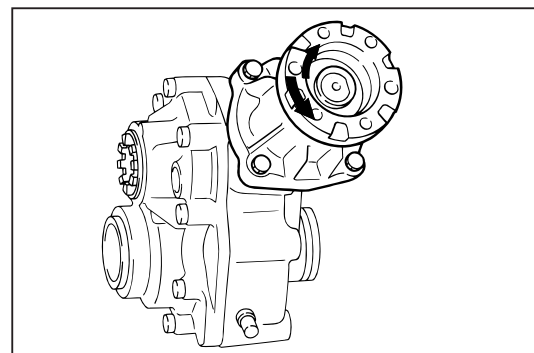


MTR00085-00088



MTR00000-00089

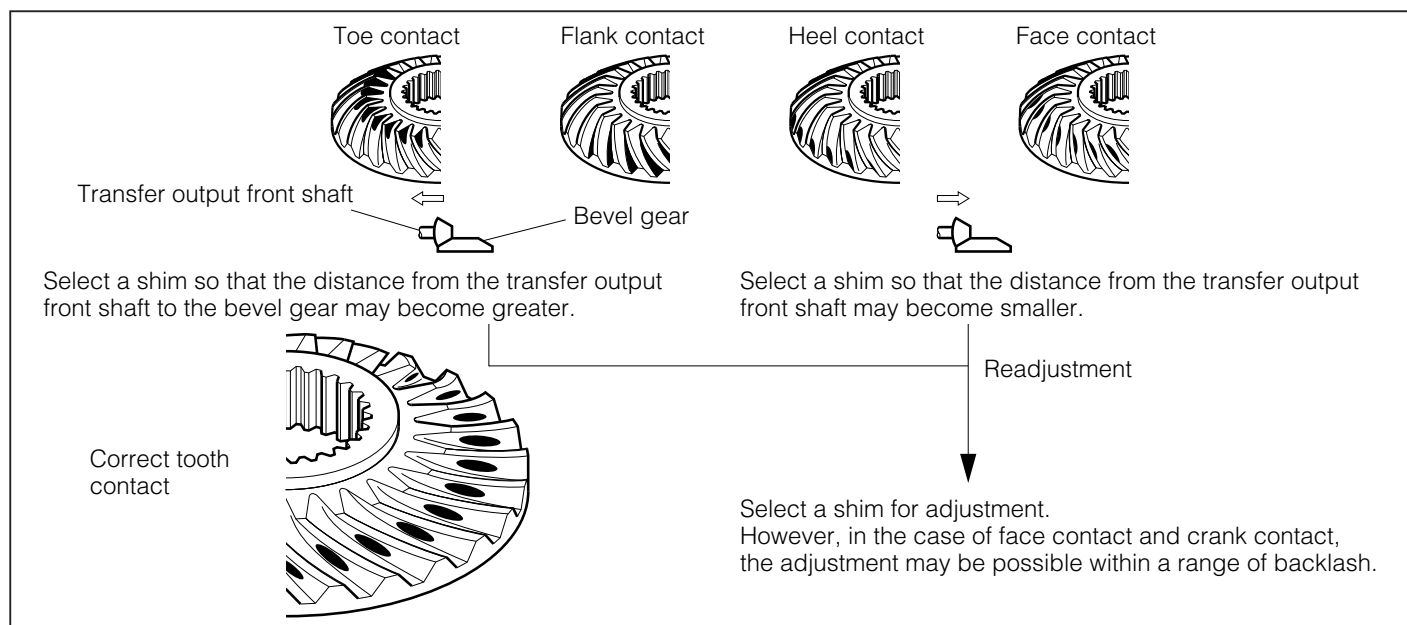
3. Remove the output shaft bearing front retainer subassembly and shim by turning the transfer output shaft flange of the output shaft bearing front retainer subassembly. Check the tooth contact between the transfer bevel gear and the transfer output front shaft.



MTR00086-00090

NOTE:

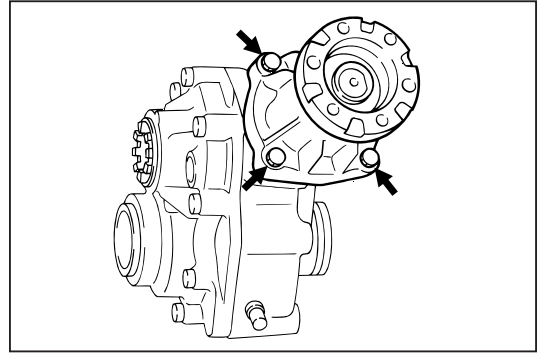
- Turn the output shaft flange clockwise and counterclockwise. At this time, check the contacting condition of the bevel gear section at several points.



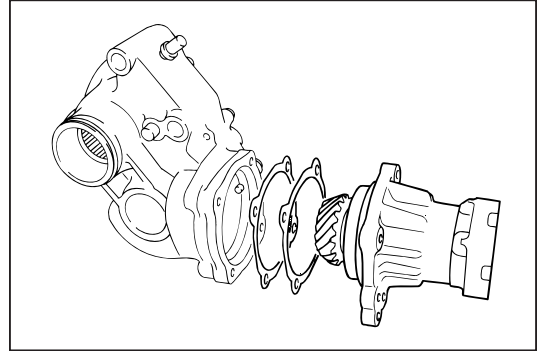
MTR00087-00091

4. If the tooth contact check is normal, proceed to the next step.
5. Assemble the shim and output shaft bearing front retainer subassembly to the transfer case assembly. Tighten the four bolts to the specified torque.

Tightening Torque: 17.7 - 23.5 N·m



MTR00088-00092



MTR00000-00093

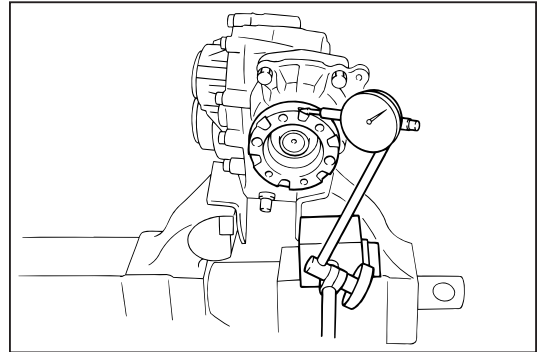
2. Check of backlash

1. Remove the drain plug and gasket from the transfer case subassembly.
2. Secure the transfer in a vice.
3. Insert a cross-recessed head screwdriver into the drain plug hole to secure the bevel gear. Then, check the backlash of the transfer bevel gear, using a dial gauge.

Specified Value: 0.08 - 0.18 mm

4. If the backlash is within the specified value, install the drain plug and a new gasket and tighten it to the specified value.

Tightening Torque: 29.4 - 49.0 N·m



MTR00089-00094

SERVICE SPECIFIED VALUE**SPECIFIED VALUE**

Item	Specified value	Use limit
Backlash of transfer bevel gear	0.08 - 0.18 mm	—
Preload of transfer output front shaft	7.8 - 15.6 N (0.8 - 1.6kg)	—
Preload of transfer output gear	0.39 - 0.78 N·m (0.04 - 0.08 kg·m)	—

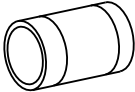
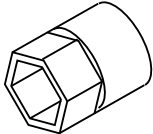
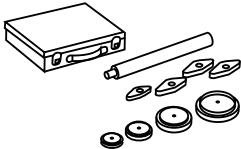
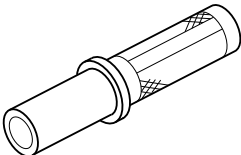
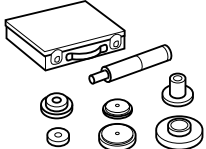
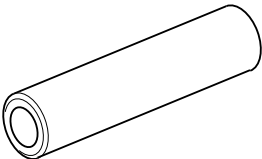
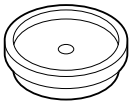
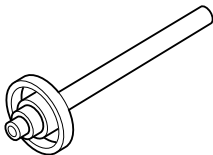
MTR00090-00000

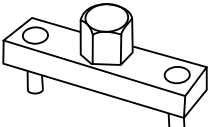
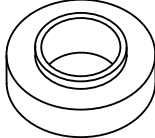
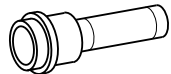
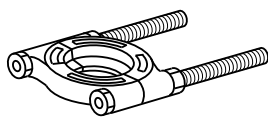
TIGHTENING TORQUE

Tightening components	Tightening torque	
	N·m	kgf·m
Transfer case × Output shaft bearing front retainer subassembly	17.7 - 23.5	1.8 - 2.4
Transfer output gear subassembly × Nut	98.0 - 137.2	10.0 - 14.0
Transfer output shaft flange × Nut	127.4 - 166.6	13.0 - 17.0
Breather plug × Transfer case	9.8 - 12.7	1.0 - 1.3
Drain plug × Transfer case	29.4 - 49.0	3.0 - 5.0
Filler plug × Transfer case cover		
Transfer bearing adjusting cover × Transfer case	22.5 - 32.5	2.29 - 3.31
Transfer bearing adjusting nut lock plate × Transfer case	6.9 - 9.8	0.7 - 1.0
Transfer case cover × Transfer case	14.7 - 19.6	1.5 - 1.9

MTR00091-00000

SSTs (Special Service Tools)

Shape	Part number, nomenclature	Use
	09950-20017-000 Universal puller	Removal of bearing
	09635-20010-000 Lower ball joint dust cover replacer	Press-fitting of bearing
	09607-87602-000 Front hub bearing wrench	Press-fitting of bearing
	09608-87501-000 Axle hub & drive pinion bearing tool set	Press-fitting of inner race of bearing
	09325-12010-000 Transmission oil plug	Press-fitting of tapered roller bearing
	09608-12010-000 Front hub & drive pinion bearing replacer set	Press-fitting of bearing
	09309-87201-000 Transmission bearing replacer	Press-fitting of bearing
	09351-32150-000 Oil seal replacer	Press-fitting of bearing
	09517-87203-000 Oil seal No. 1 replacer	Press-fitting of oil seal
	09506-87302-000 Differential drive pinion bearing cone rear replacer	Press-fitting of oil seal

Shape	Part number, nomenclature	Use
	09351-87217-000 Transfer bearing adjusting lock nut wrench	Removal/installation of transfer bearing adjusting lock nut
	09506-87304-000 Differential drive pinion bearing cone rear replacer	Press-fitting of bearing
	09517-12010-000 Rear axle shaft oil seal replacer	Removal of transfer input radial ball bearing
	09950-87701-000 Bearing remover	Removal of radial ball bearing
Pin punch		
Vernier calipers, micrometer, thickness gauge, dial gauge, depth gauge		
Three Bond 1216, Gear oil SAE 80W-90 (API classification GL-5)		