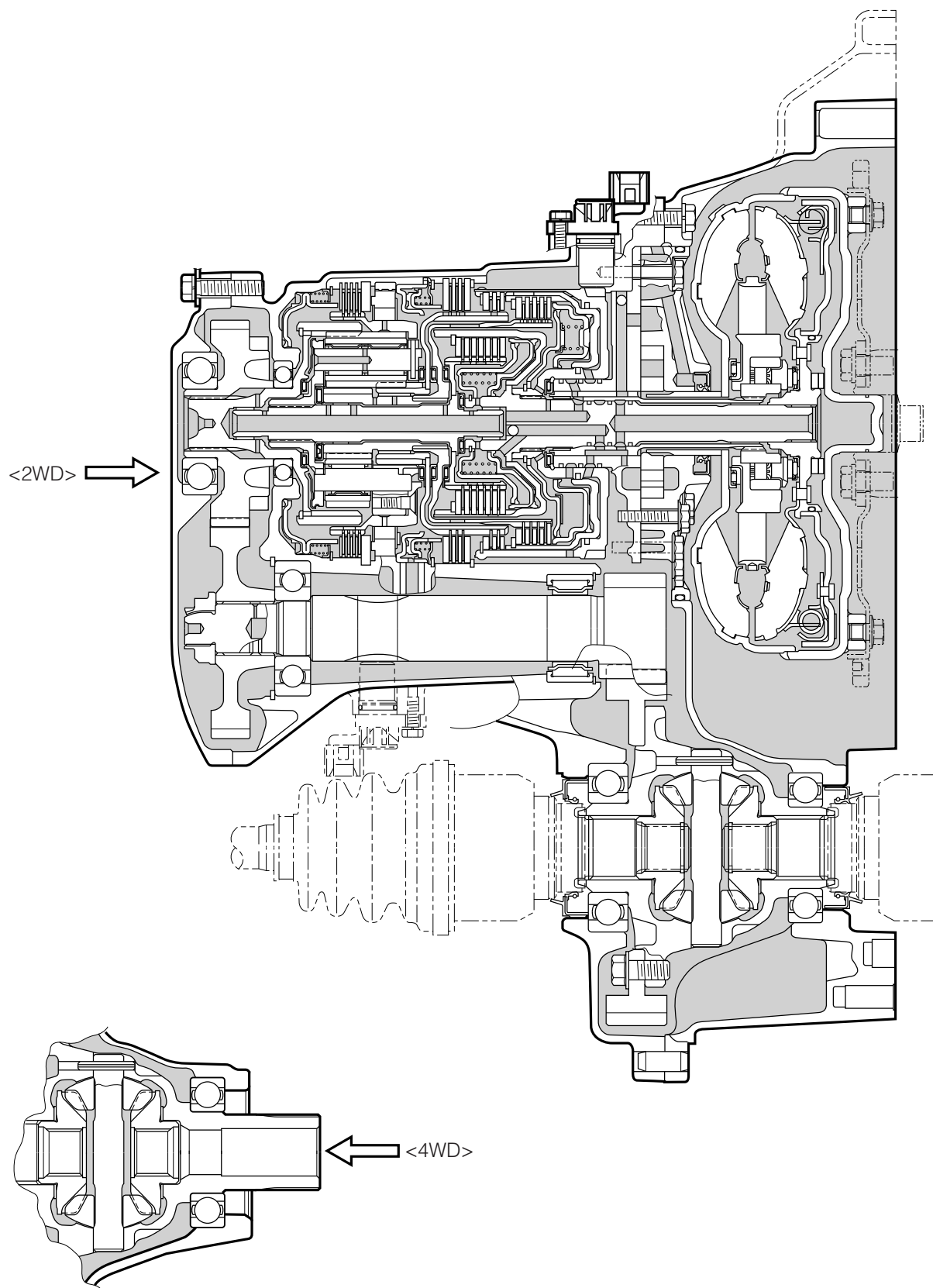


AUTOMATIC TRANSAXLE

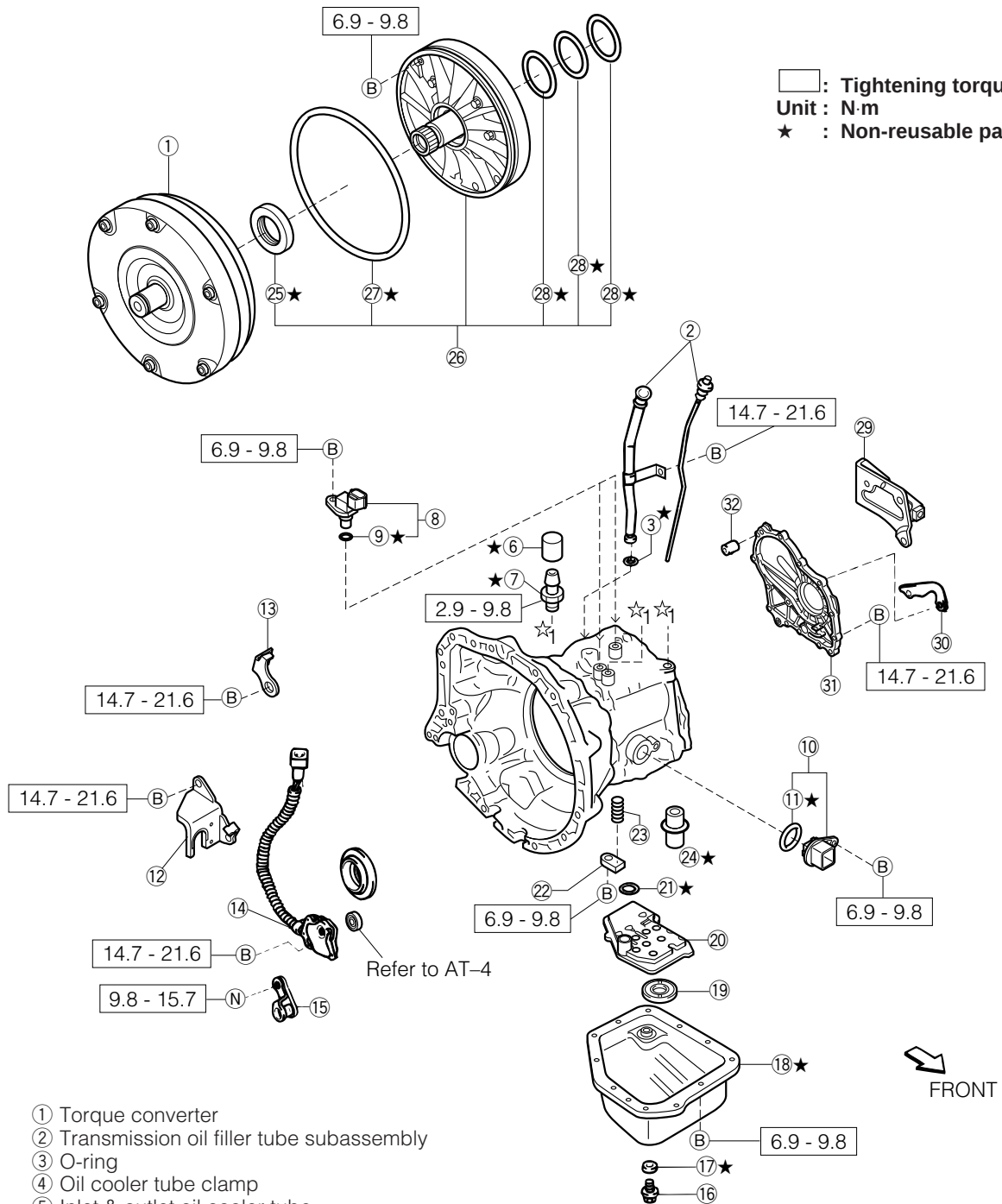
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OUTLINE

SECTIONAL VIEW OF AUTOMATIC TRANSAXLE

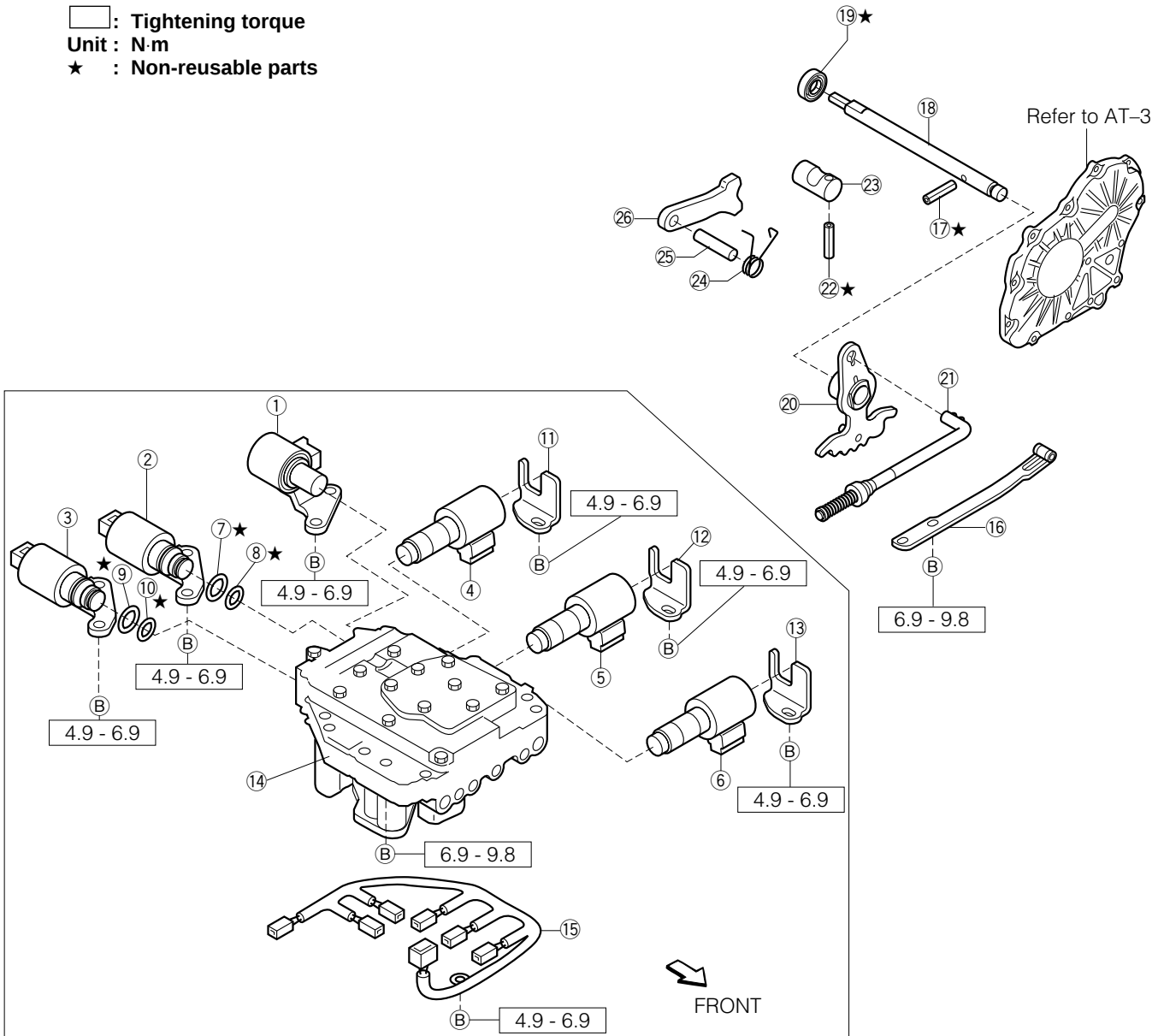


COMPONENTS



COMPONENTS

 : Tightening torque
 Unit : N·m
 ★ : Non-reusable parts



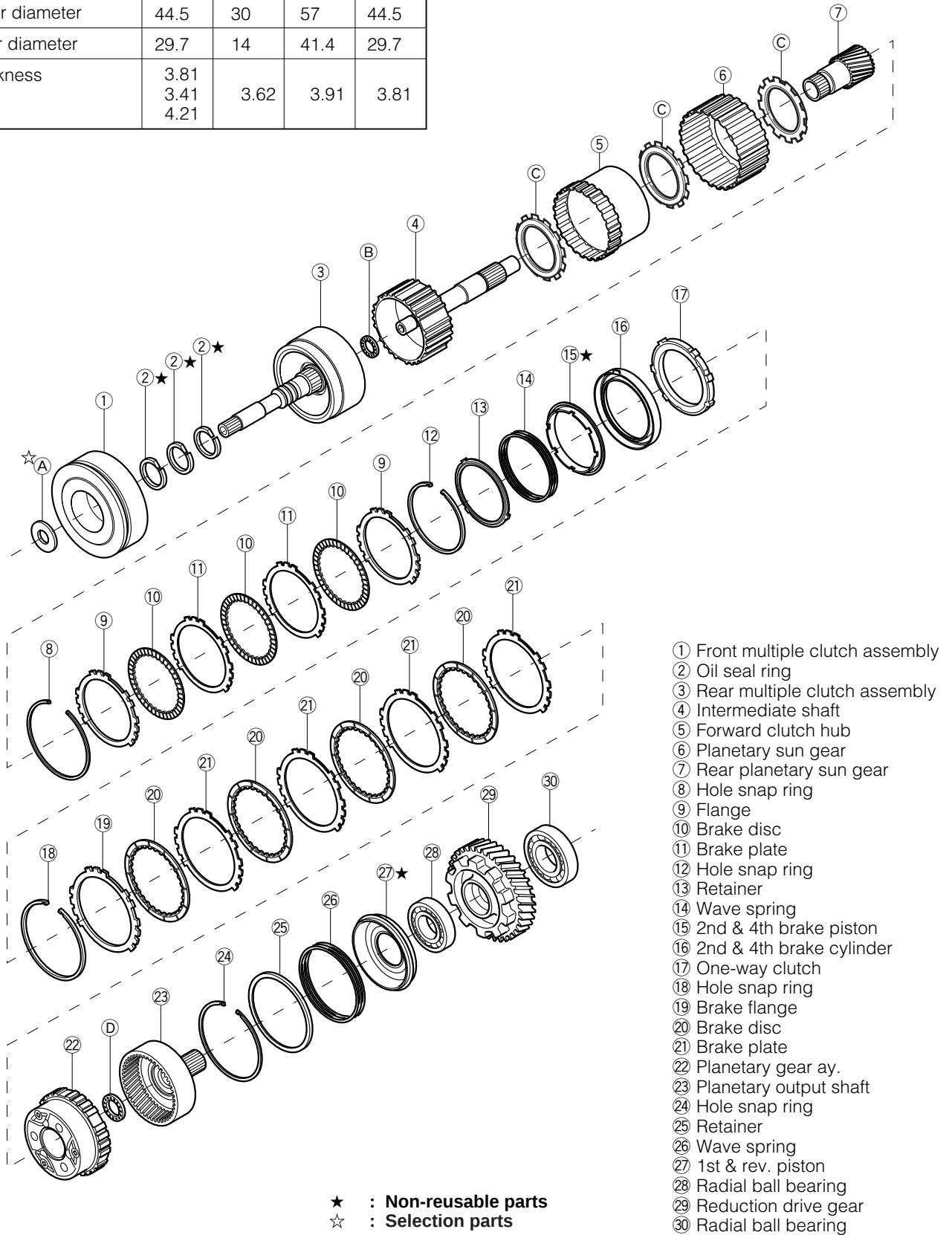
- ① Look up clutch control solenoid Ay
- ② Transmission 3-way solenoid Ay
- ③ Transmission 3-way solenoid Ay
- ④ Clutch control solenoid Ay No. 1
- ⑤ Clutch control solenoid Ay No. 2
- ⑥ Clutch control solenoid Ay No. 3
- ⑦ O-ring
- ⑧ O-ring
- ⑨ O-ring
- ⑩ O-ring
- ⑪ Bracket
- ⑫ Bracket
- ⑬ Bracket

- ⑭ Valve body assembly
- ⑮ Wire harness
- ⑯ Manual detent spring
- ⑰ Slotted spring pin
- ⑱ Manual lever subassembly
- ⑲ T-type oil seal
- ⑳ Manual valve lever
- ㉑ Parking lock lever
- ㉒ Slotted spring pin
- ㉓ Parking lock pawl cam support
- ㉔ Torsion spring
- ㉕ Parking lock pawl shaft
- ㉖ Parking lock pawl

COMPONENTS (INNER PARTS)

Thrust bearing specification

	(A)★	(B)	(C)	(D)
Outer diameter	44.5	30	57	44.5
Inner diameter	29.7	14	41.4	29.7
Thickness	3.81 3.41 4.21	3.62	3.91	3.81

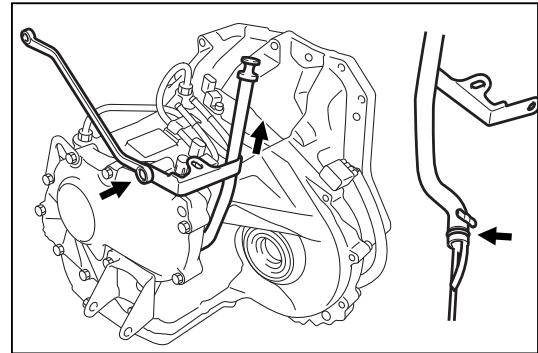


REMOVAL

1. Remove the bolt of the transmission oil filler tube sub-assembly.
2. Pull out the tube subassembly upwards.
3. Remove the O-ring from the tube subassembly.

NOTE:

- Never reuse the removed O-ring.

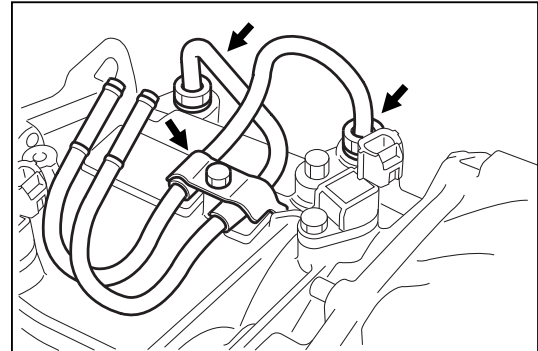


MAT00005-00004

4. Removal of oil cooler tube and breather plug.
(1) Remove the oil cooler tube clamp.
- (2) Remove the unions for the inlet & outlet oil cooler tube.

NOTE:

- Never reuse the oil cooler tubes.

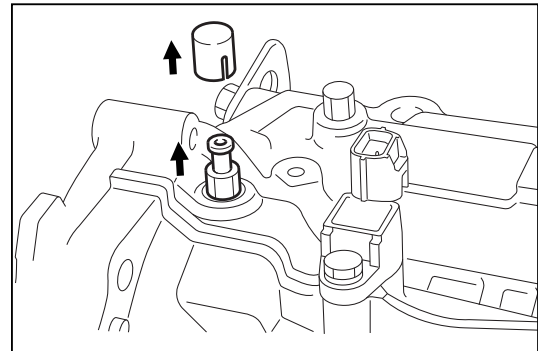


MAT00006-00005

- (3) Remove the breather plug cover and the breather plug union.

NOTE:

- Never reuse the removed unions, and cover.

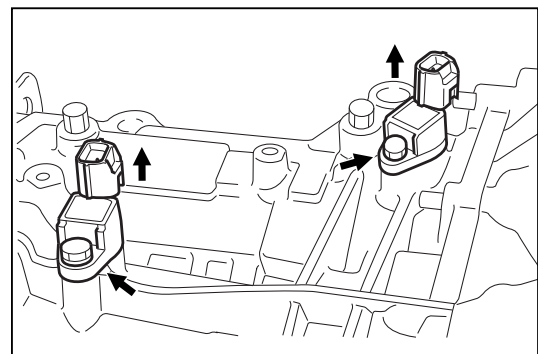


MAT00007-00006

5. Remove the two transmission revolution sensors by removing the bolts.

NOTE:

- Never reuse the removed O-rings of the sensors.



MAT00008-00007

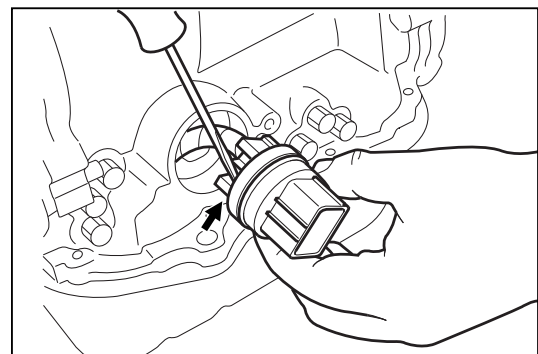
6. Removal of the transmission solenoid connector.
(1) Remove the bolt of the connector.
- (2) Pull out the connector from transaxle case and disconnect the connector using a flat screwdriver.

CAUTION:

- Be very careful not to break the pawl of the connector during the removal.

NOTE:

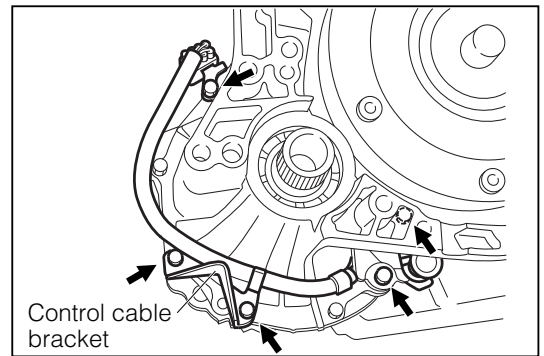
- Never reuse the removed O-ring of the connector.



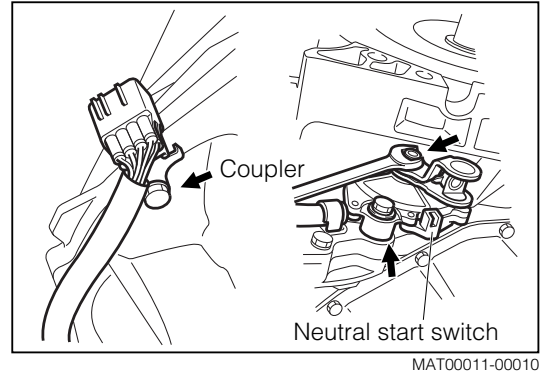
MAT00009-00008

7. Removal of neutral start switch assembly

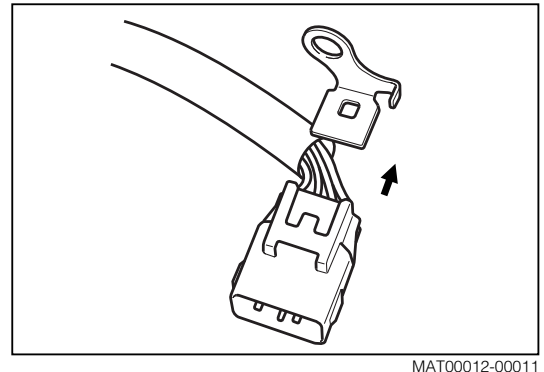
- (1) Remove the control cable bracket by removing the 2 bolts.



- (2) Remove the neutral start switch assembly by removing the bolt and nut.
- (3) Remove the neutral start switch coupler by removing the bolt.

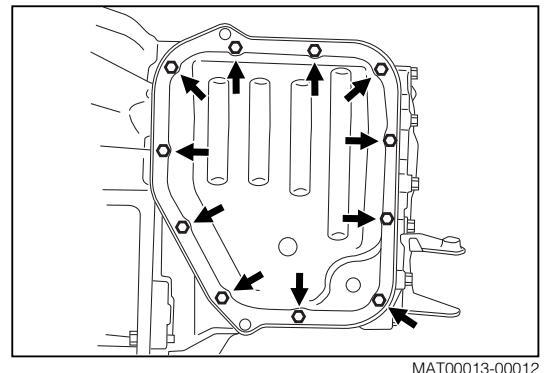


- (4) Disassemble the coupler from the connector using a flat driver.



8. Removal of the valve body assembly.

- (1) Remove the 11 bolts of the transaxle oil pan sub-assembly.



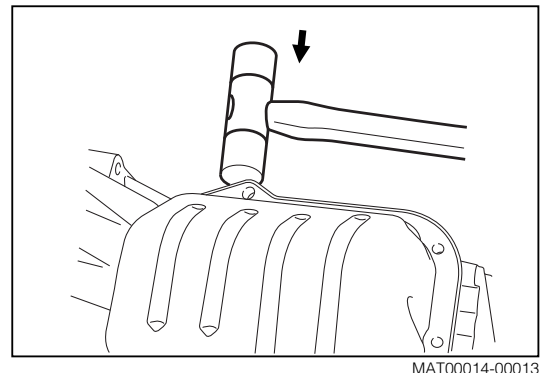
- (2) Remove the transaxle oil pan subassembly by gently tapping on the rim, with a plastic hammer.

CAUTION:

- Do not turn over the transmission, for this will contaminate the valve body with foreign materials deposited at the bottom of the oil pan.

NOTE:

- Never reuse the oil pan.

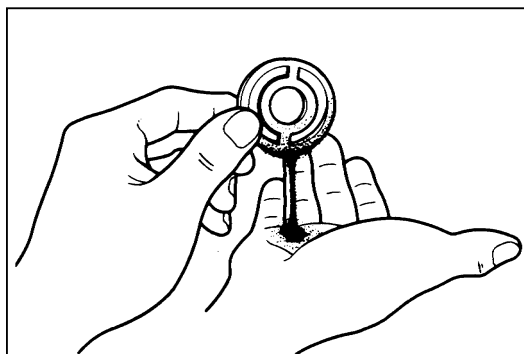


(3) Check of pan for particles.

Remove the magnet and use it to collect any steel chips. Inspect the oil pan for any chips and particles collected on the magnet to find out the type of wear of the transmission.

Steel (magnetic) ... Wear of bearing, gear and plate

Brass (nonmagnetic) ... Wear of bush



MAT00015-00014

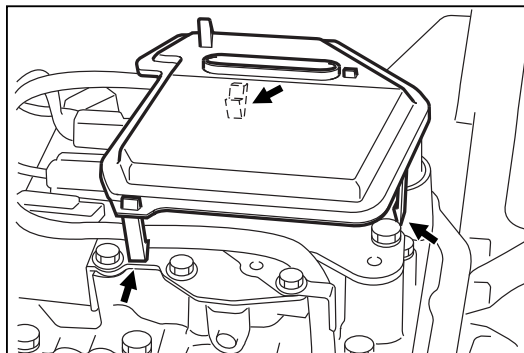
(4) Remove the oil strainer subassembly by pushing out the 3 pawls of the oil strainer using a flat driver.

CAUTION:

- The strainer subassembly has 3 pawls. Be very careful not to break or bend them during removal.

NOTE:

- Be sure to check whether the mesh of oil strainer is clean.

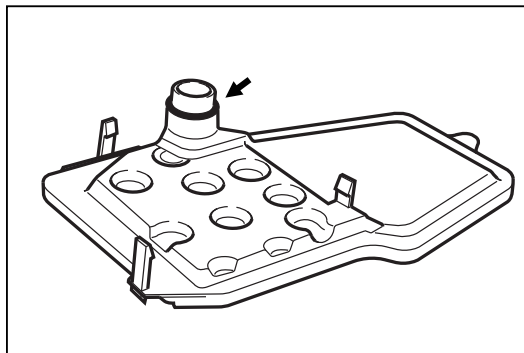


MAT00016-00015

(5) Remove the O-ring from the stem of the oil strainer.

NOTE:

- Never reuse the removed O-ring.

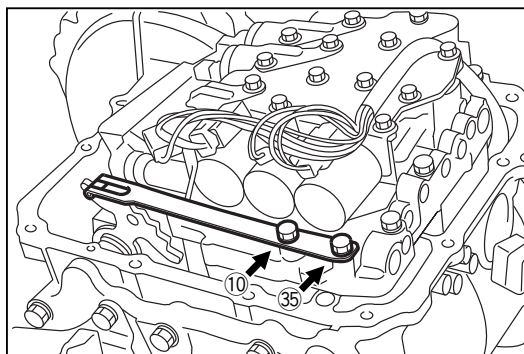


MAT00017-00016

(6) Remove the manual detent spring by removing the 2 bolts.

NOTE:

- Be sure to remove the bolts evenly and uniformly.
- The numerals in the right illustration indicate the nominal length of the bolt.

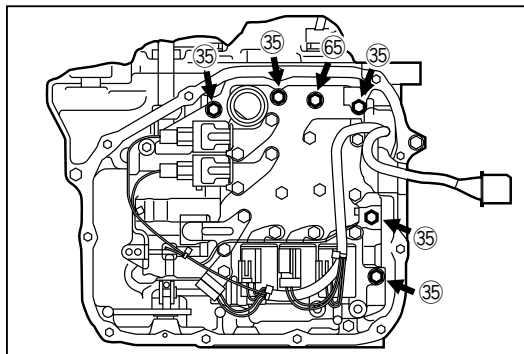


MAT00018-00017

(7) Remove the valve body by removing the 5 bolts.

NOTE:

- Be sure to remove the bolts evenly and diagonally.
- The numerals in the right illustration indicate the nominal length of the bolt.

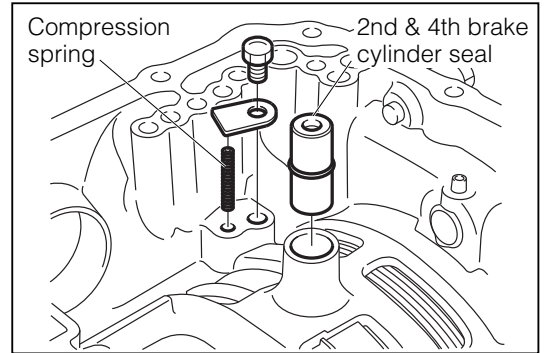


MAT00019-00018

9. Remove the compression spring and the 2nd & 4th brake cylinder seal by removing the bolt and plate.
10. Remove the 2nd & 4th brake cylinder seal.

NOTE:

- Never reuse the 2nd & 4th brake cylinder seal.



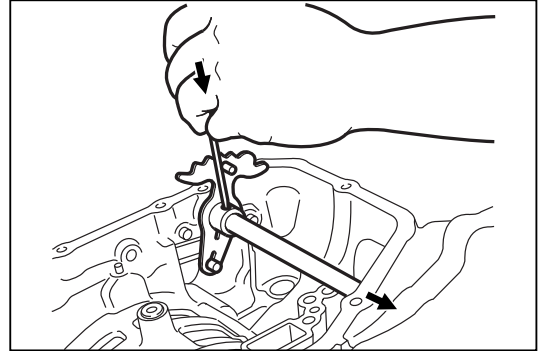
MAT00020-00019

11. Remove the manual lever subassembly.
 - (1) Remove the slotted spring pin, using a pin punch and a hammer.

NOTE:

- When removing the pin, be very careful not to drop it into the transmission case.
- Never reuse the removed pin.

- (2) Pull out the manual valve lever shaft subassembly toward the engine side.



MAT00021-00020

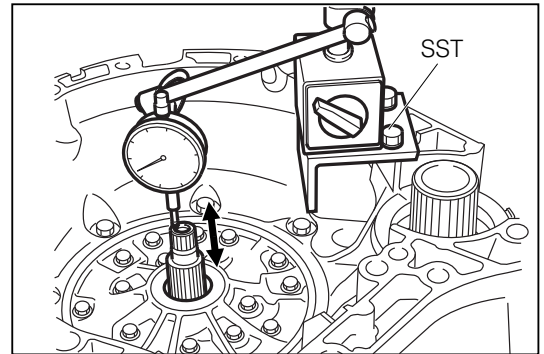
12. Remove the stator shaft & oil pump assembly.
 - (1) Measure the input shaft end play, using a dial gauge and following SST.

SST: 09350-87202-000 (09351-87210-000)

Specified Value: 0.26 - 0.88 mm

NOTE:

- Be sure to record the measured value for a guide during the assembly.

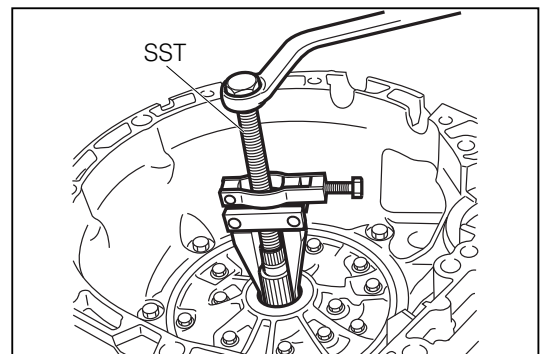


MAT00022-00021

- (2) Remove the T-type oil seal, using the following SST.
- SST: 09308-10010-000

NOTE:

- Never reuse the removed oil seal.

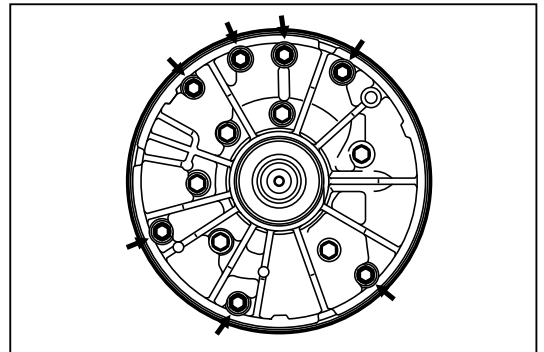


MAT00023-00022

- (3) Remove the 7 bolts of the stator shaft & oil pump assembly.

NOTE:

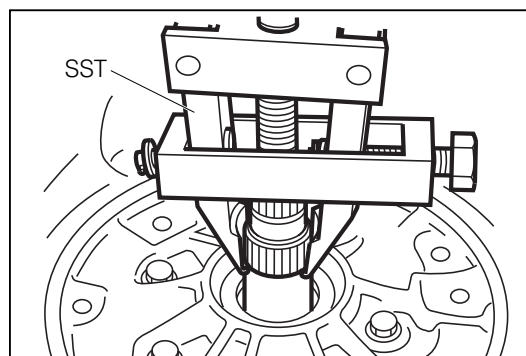
- Be sure to remove the bolts evenly and diagonally.
- Never loosen any bolt other than the specified ones in the right figure.



MAT00024-00023

AT-10

- (4) Remove the stator shaft & oil pump assembly with the O-ring, using the following SST.
- SST: 09820-00021-000

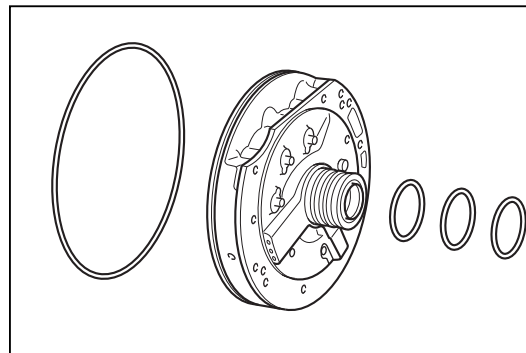


MAT00025-00024

- (5) Remove the O-ring from the stator shaft & oil pump assembly and the 3 clutch drum oil seal rings.

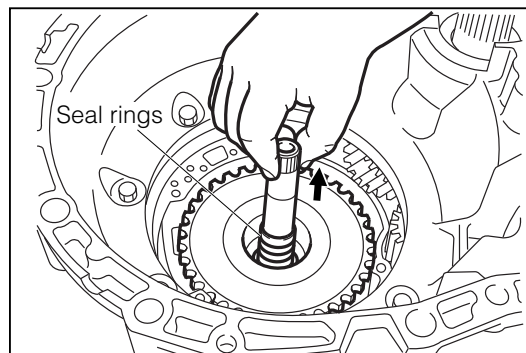
NOTE:

- Never reuse the removed O-ring.
- Never reuse the removed oil seal rings.



13. Remove the front and rear multiple clutch assembly.

- (1) Pull out the front and rear multiple clutch assembly by holding the stator shaft.

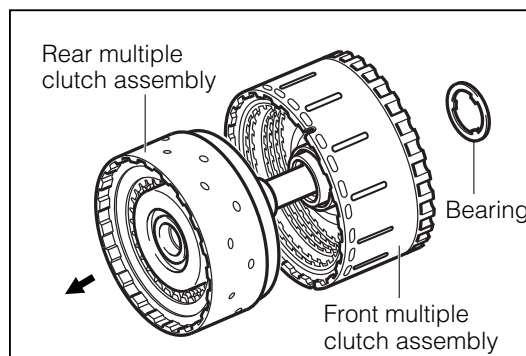


MAT00027-00026

- (2) Separate the front multiple clutch assembly with the rear multiple clutch assembly.
- (3) Remove the thrust needle bearing from the front multiple clutch assembly.
- (4) Remove the 3 seal rings from the rear multiple clutch assembly.

NOTE:

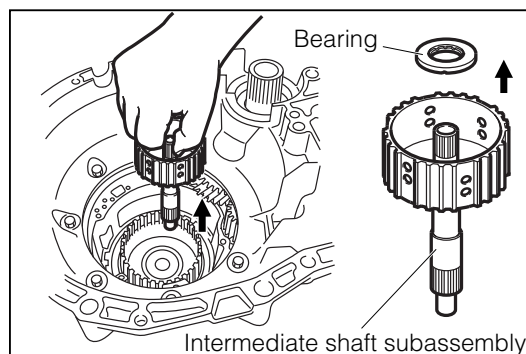
- Never reuse the removed oil seal rings.



MAT00028-00027

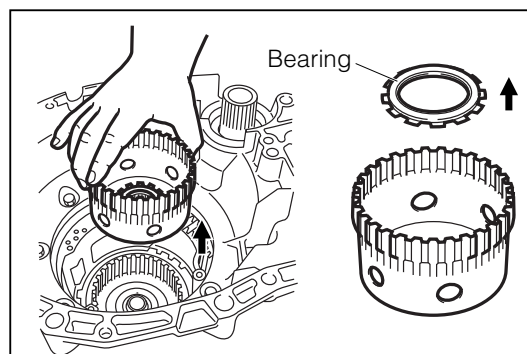
14. Removal of intermediate shaft subassembly.

- (1) Remove the intermediate shaft subassembly.
- (2) Remove the thrust needle bearing from the intermediate shaft subassembly.



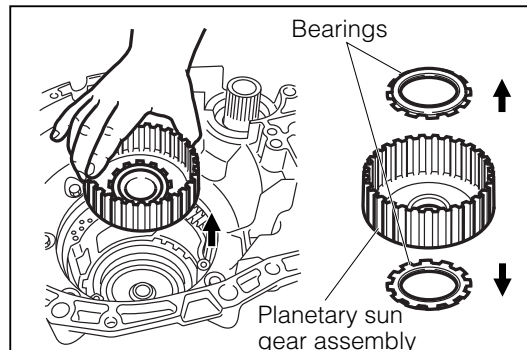
MAT00029-00028

15. Removal of forward clutch hub.
 - (1) Remove the forward clutch hub.
 - (2) Remove the thrust needle bearing from the forward clutch hub.



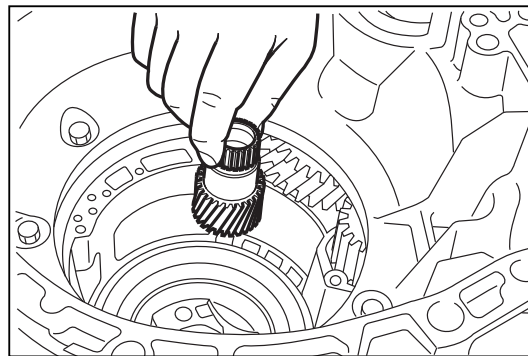
MAT00030-00029

16. Removal of planetary sun gear assembly.
 - (1) Remove the planetary sun gear assembly.
 - (2) Remove the two thrust needle bearings from the planetary sun gear assembly.



MAT00031-00030

17. Removal of the rear planetary sun gear subassembly.

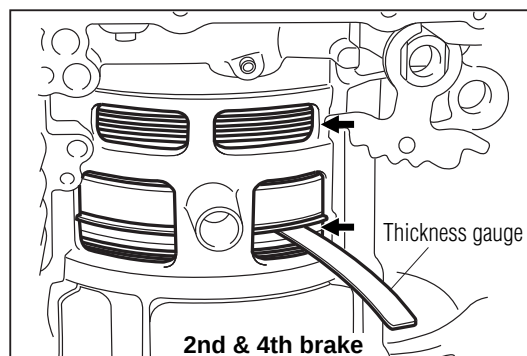


MAT00032-00031

18. Measurement of 2nd & 4th and 1st & reverse brake end play.
 - (1) Turn over the transaxle case.
 - (2) Measure the 2nd & 4th brake end play from window (A), using a thickness gauge.

Specified Value: 1.08 - 1.53 mm
 - (3) Measure the 1st & reverse brake end play from window (B), using a thickness gauge.

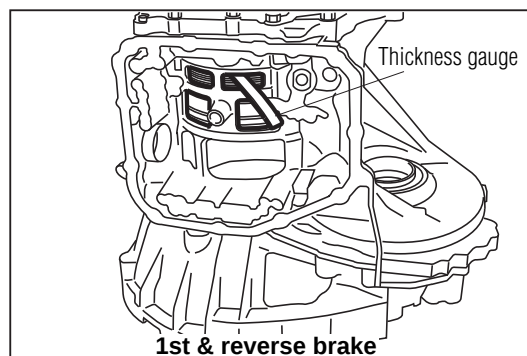
Specified Value: 0.69 - 1.18 mm



MAT00033-00032

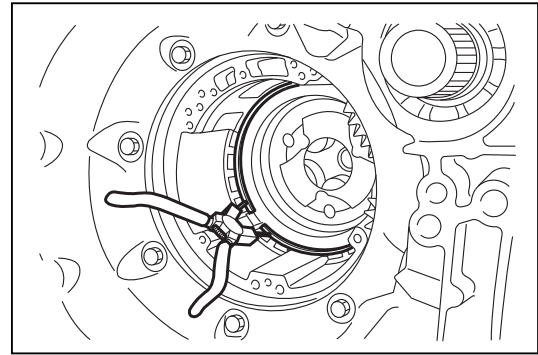
NOTE:

- Be sure to record the measured value for a guide during the assembly.
- The tightness which you encounter during this insertion/withdrawal of the thickness gauge should be virtually the same as the tightness which you would encounter during the thickness adjustment of the valve rocker arm.



MAT00034-00033

19. Removal of 2nd & 4th brake discs and plates.
- (1) Remove the hole snap ring, using snap ring pliers.

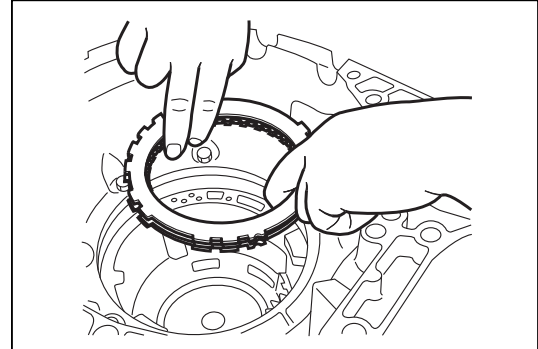


MAT00035-00034

- (2) Remove the brake flanges, brake discs and brake plates in a set faces toward the front side and remove them in the following order.

F = Brake flange, D = Brake disc, P = Brake plate

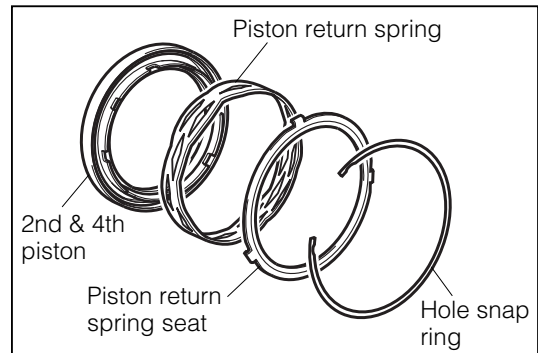
F → D → P → D → P → D → P → D → F



MAT00036-00035

20. Removal of 2nd & 4th brake piston assembly.

- (1) Remove the hole snap ring, using snap ring pliers.
- (2) Remove the brake piston return spring seat, brake piston return spring, and the 2nd and 4th piston.

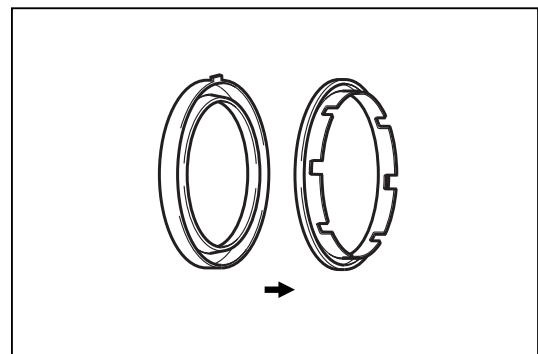


MAT00037-00036

- (3) Divide the 2nd and 4th brake piston using pliers.

NOTE:

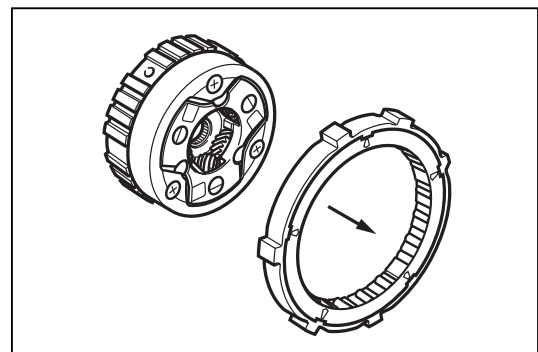
- Never reuse the divided piston.



MAT00038-00037

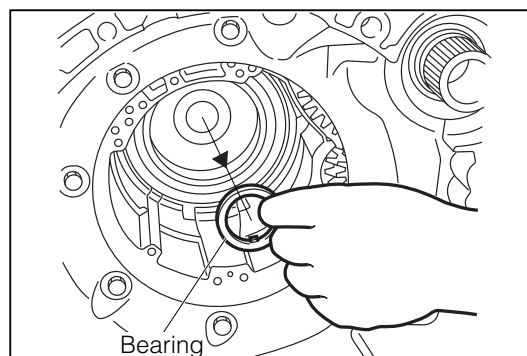
21. Removal of the one-way clutch and the planetary gear assembly.

- (1) Remove the planetary gear assembly with the one-way clutch installed.
- (2) Remove the one-way clutch from the planetary gear assembly.



MAT00039-00038

22. Removal of the 1st and reverse brake discs and plates.
- (1) Remove the thrust needle roller bearing from the planetary output shaft subassembly.

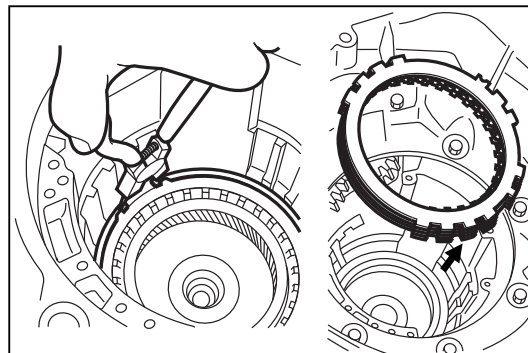


MAT00040-00039

- (2) Remove the hole snap ring, using snap ring pliers, and move the brake flange, brake discs and brake plates in a set faces toward the front side and remove them in the following order.

F = Brake flange, D = Brake disc, P = Brake plate

F → D → P → D → P → D → P → D → P



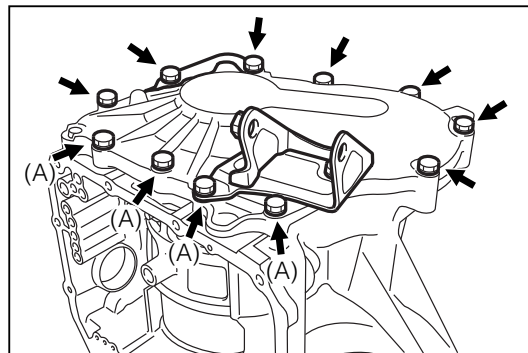
MAT00041-00040

23. Remove the rear transmission case cover.

- (1) Turn over the transaxle case.
- (2) Remove the 13 bolts and 2 brackets of rear transmission case cover subassembly.

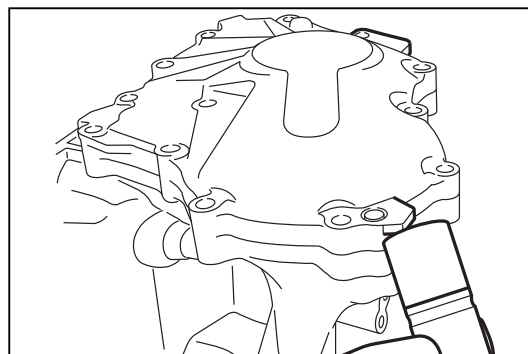
NOTE:

- Be sure to loosen the bolts evenly and diagonally.
- Never reuse the removed 4 bolts (A) illustrated in the right figure.



MAT00042-00041

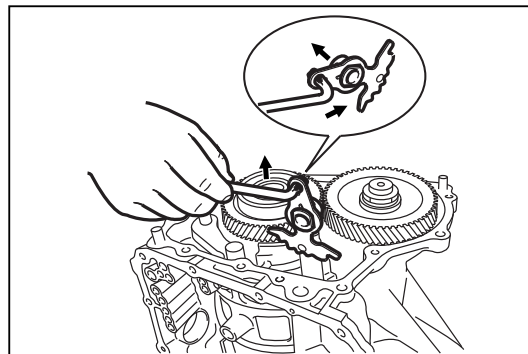
- (3) Remove the rear transmission case cover subassembly by lightly and uniformly tapping the 2 rib sections, using a plastic hammer.



MAT00043-00042

24. Removal of planetary output shaft subassembly.

- (1) Remove the manual valve lever with the parking lock rod.
- (2) Disassemble the manual valve lever by aligning the cut-out groove with the protruding section of the parking lock rod.

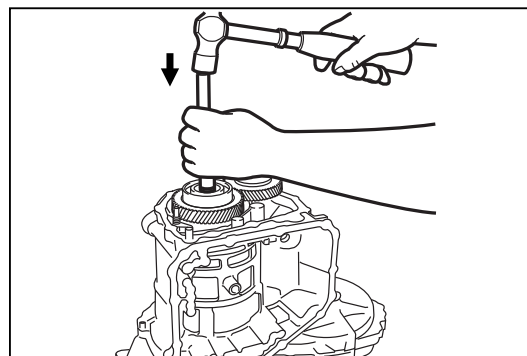


MAT00044-00043

- (3) Tap the planetary output shaft subassembly lightly, using a brass bar and a hammer, until it becomes free.

NOTE:

- Be sure to place a cloth or the like inside the transmission case in case the planetary output shaft subassembly drops.

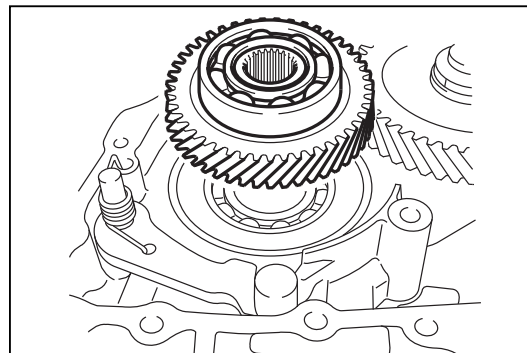


MAT00045-00044

- (4) Remove the planetary output shaft subassembly.
 (5) Remove the reduction drive gear and the radial ball bearing.

NOTE:

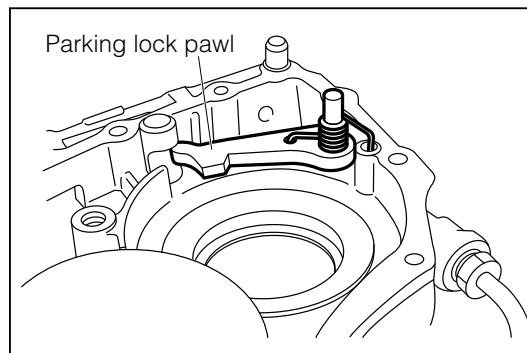
- If any difficulty is encountered in removing the bearing, remove it by applying a light impact from the inside of the transmission case, using a brass bar and a plastic hammer.
- The reduction drive gear and the radial ball bearing are non-disassemble parts.



MAT00046-00045

25. Remove the parking lock pawl.

- (1) Remove the torsion spring, the parking lock pawl and the parking lock pawl shaft.



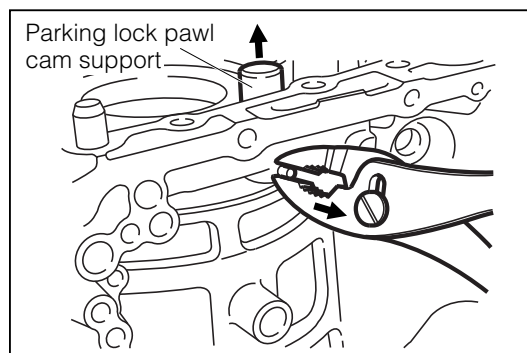
MAT00047-00046

- (2) Remove the slotted spring pin, using a vice clip.

NOTE:

- Securely pinch the pin by vice clip and pull it out with twisting.
- Never reuse the removed pin.

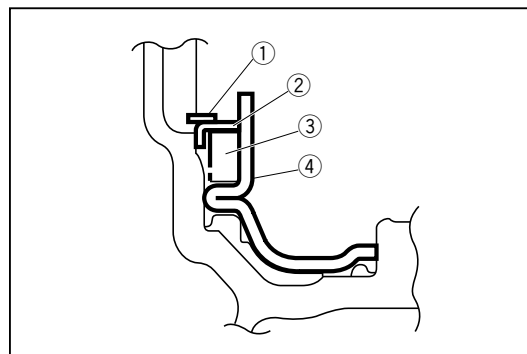
- (3) Pull out the parking lock pawl cam support to upward.



MAT00048-00047

26. Remove the 1st & reserve brake assembly.

- (1) Remove the shaft snap ring ①, using snap ring pliers.
 (2) Remove the piston return spring seat ② and, piston return spring ③.



MAT00049-00048

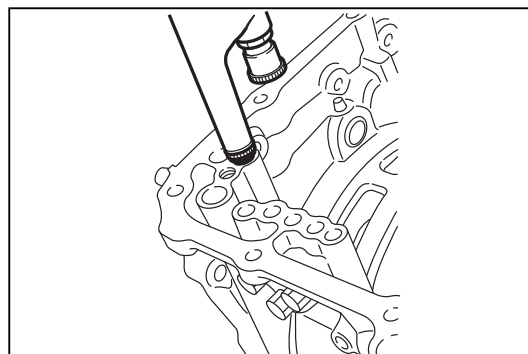
- (3) Applying compressed air of 392 - 784 kPa from the oil hole indicated in the right figure.
- (4) Remove the 1st & reverse piston ④.

WARNING:

- Care must be exercised as to oil splashing when compressed air is used for blowing.

NOTE:

- Never reuse the removed 1st & reverse piston.



MAT00050-00049

INSPECTION

FRONT AND REAR MULTIPLE CLUTCH ASSEMBLY

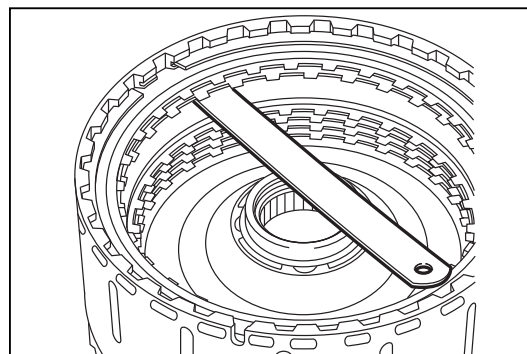
1. Check of forward clutch (C2) piston stroke and Rear clutch (C3) piston stroke

- (1) Measure the forward clutch (C2) end play, Rear clutch end play using a thickness gauge.

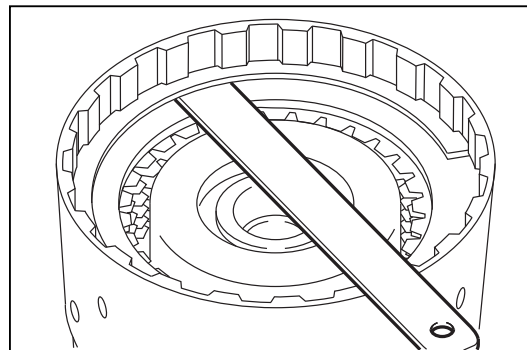
Specified Value:

Forward clutch (C2): 0.67 - 0.98

Rear clutch (C3): 1.24 - 1.55



MAT00051-00050



MAT00052-00051

NOTE:

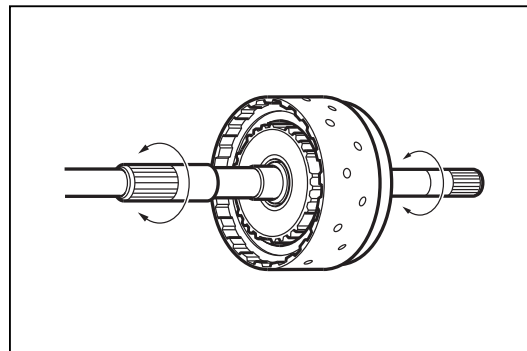
- The tightness which you encounter during this insertion/withdrawal of the thickness gauge should be virtually the same as the tightness which you would encounter during the thickness adjustment of the engine valves.

If the measured end play fails to conform to the specified value above, replace the multiple clutch assembly with a new one.

2. Confirmation of turning effort of rear clutch disc

- (1) Install the thrust needle bearing to the rear multiple clutch assembly, in the right direction.

- (2) Assemble the intermediate shaft subassembly. Ensure that the clutch discs rotate smoothly.

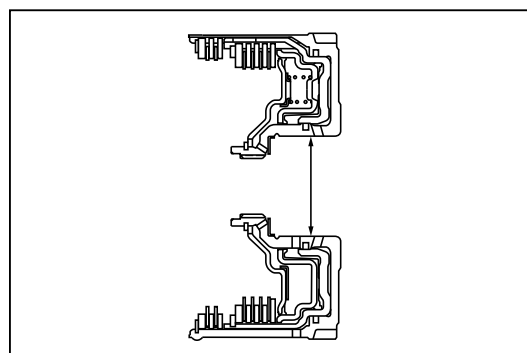


MAT00053-00052

3. Measure the bush inner diameter of the front multiple clutch assembly, using an inner caliper gauge.

Specified Value: 44.50 - 44.53 mm

Allowable Limit: 44.58 mm



MAT00054-00053

NOTE:

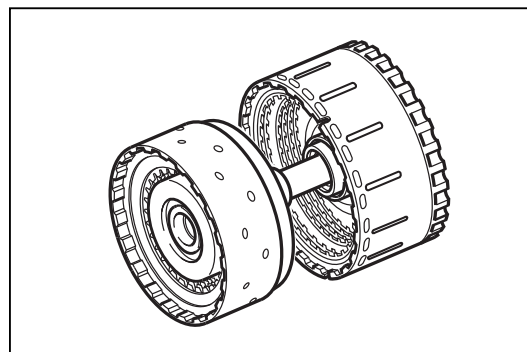
- Ensure that the measurement should be performed at several points.
- If the measured value exceeds the allowable limit, replace the front multiple clutch assembly with a new one.

4. Confirmation of turning effort of front multiple clutch assembly

- (1) Insert the rear multiple clutch assembly to the front multiple clutch assembly, with the 3 new oil seal rings assembled.

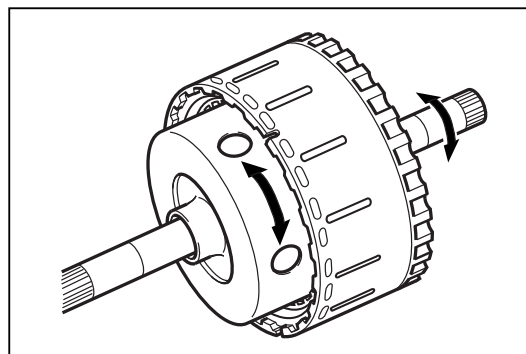
NOTE:

- Be careful not to damage the seal rings of the rear multiple clutch assembly.



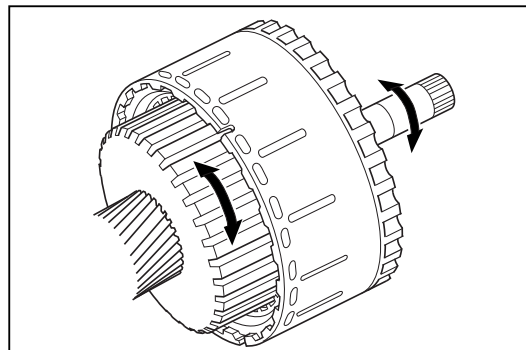
MAT00055-00054

- (2) Install the thrust needle bearing to the rear multiple clutch assembly, in the right direction.
- (3) Assemble the forward clutch hub. Ensure that it rotate smoothly.



MAT00056-00055

- (4) Install the thrust needle bearing to the rear multiple clutch assembly, in the right direction.
- (5) Assemble the planetary sun gear assembly. Ensure that it rotate smoothly.



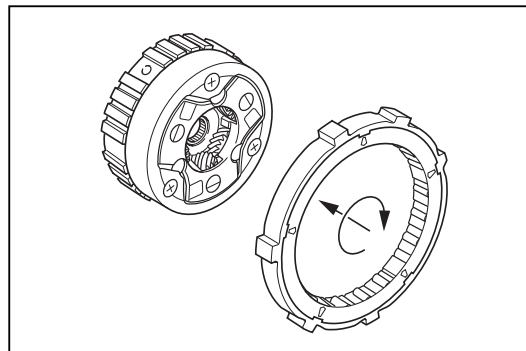
MAT00057-00056

ONE-WAY CLUTCH

Hold the planetary gear assembly and turn the one-way clutch.

NOTE:

- Ensure that it turns freely when turned counterclockwise and locked when turns clockwise.



MAT00058-00057

ASSEMBLY

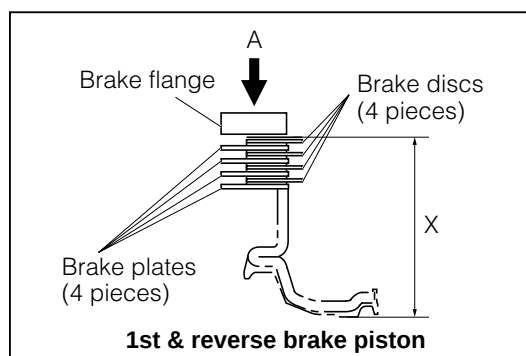
- Selection of brake flanges, snap rings for 1st & reverse brake piston

Before assembling the unit, determine the thickness of the snap rings brake flanges, as follows.

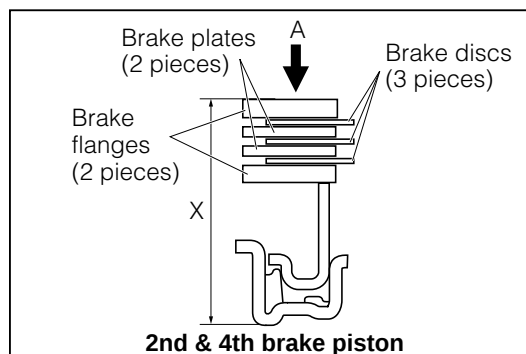
- Assemble the piston, brake discs and brake plates as shown in the right figure. Push them from the direction A with a load of 4.9 to 7.8 N. (Place a suitable weight).
- Measure the dimension X with a height gauge. Based on this dimension, select a suitable brake flange (1st & Rev), snap ring (2nd & 4th) according to the table below.

NOTE:

- The dimension X is the distance measured between the following points.
1st & Rev: Brake disc end and brake piston end surface
2nd & 4th: Brake flange end and brake piston end surface
- The dimension X shall be the maximum value among values measured at three points on the circumference.
- If the variation of the three measured values exceed 0.2 mm, redo the measurement of the dimension of each part.



MAT00170-00167



MAT00171-00168

Table Showing Availability of Brake Flanges for 1st & Reverse Brake Piston

No.	Dimension X	Part number	Thickness
1	39.45 - 39.661	35885-97201	4.0
2	39.25 - 39.45	35885-97202	4.2
3	39.05 - 39.25	35885-97203	4.4
4	38.85 - 39.05	35885-97204	4.6
5	38.65 - 38.85	35885-97205	4.8
6	38.439 - 38.65	35885-97206	5.0

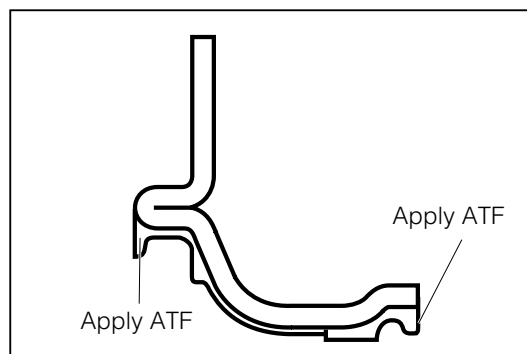
Table Showing Availability of Snap Rings for 2nd & 4th Brake Piston

No.	Dimension X	Part number	Thickness	Identification color
1	35.854 - 36.11	90045-21179	2.25	Black
2	36.11 - 36.36	90045-21178	2.00	Brown
3	36.36 - 36.61	90045-21177	1.75	Blue
4	36.61 - 36.866	90045-21176	1.50	Silver

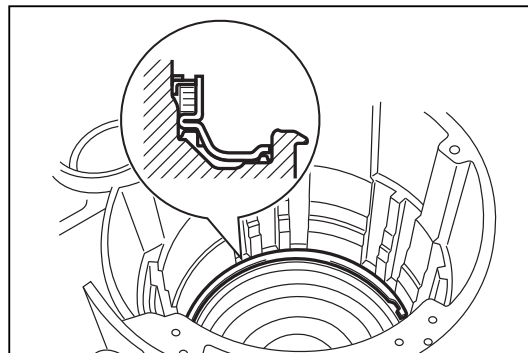
MAT00172-00000

2. Assembly of 1st & reverse brake piston.

- (1) Apply ATF to the outer and inner periphery of the new brake piston and to the inserted section of brake piston of the transaxle case.



- (2) Insert the new brake piston, piston return spring, and piston return spring seat into the transaxle case.
- (3) Temporarily assemble the hole snap ring on the return spring seat using snap ring pliers.

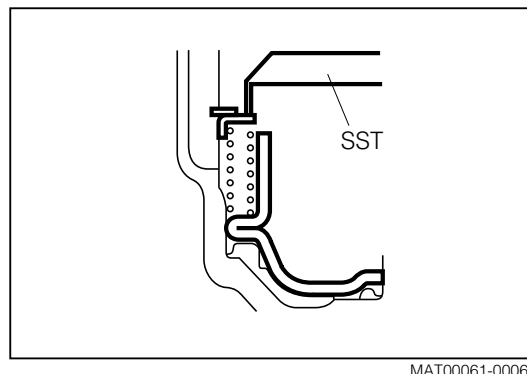


- (4) Compress the piston return spring seat, using the following SST.

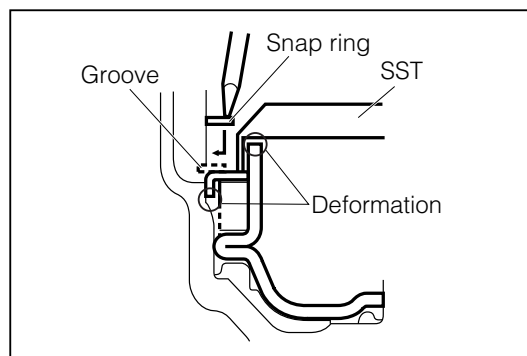
SST: 09351-97201-000, 09350-87202-000

NOTE:

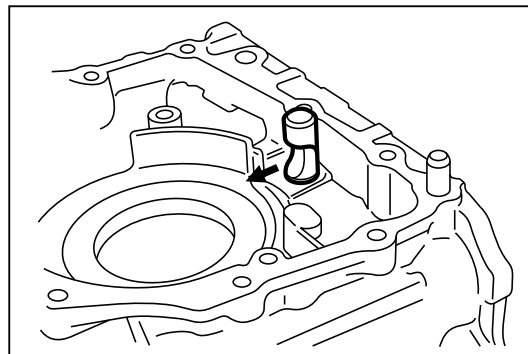
- To prevent deformation, be sure to stop tightening the SST when the spring seat has been lowered 1 to 2 mm from the snap ring installation groove.
- Do not expand the ring excessively.
- The hole snap ring will become a center guide for the SST.



- (5) Install the hole snap ring, using a flat driver. And remove the SST.



- (6) Face the recessed side of the parking lock pawl cam support toward the section (A) at the drive gear side.
- (7) Align the parking lock pawl cam support hole with the slotted spring pin installation hole of the transaxle case.
- (8) Install the parking lock pawl cam support to the transaxle case.

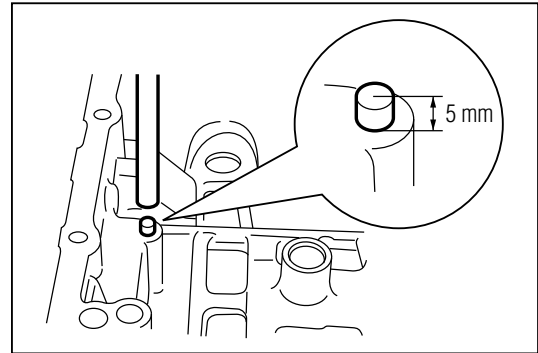


AT-20

- (9) Drive a new slotted spring pin, using a pin punch and a hammer.

NOTE:

- After driving a new pin, make sure that its protruding length is approx. 5 mm.



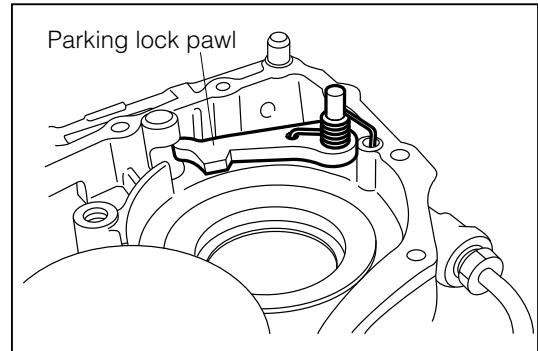
MAT00064-00063

- (10) Install the parking lock pawl shaft and the parking lock pawl to the transaxle case.

- (11) Install the torsion spring, as indicated in the right figure.

NOTE:

- Push the parking lock pawl and release it. At this time, make sure that the pawl returns to the original position.



MAT00065-00064

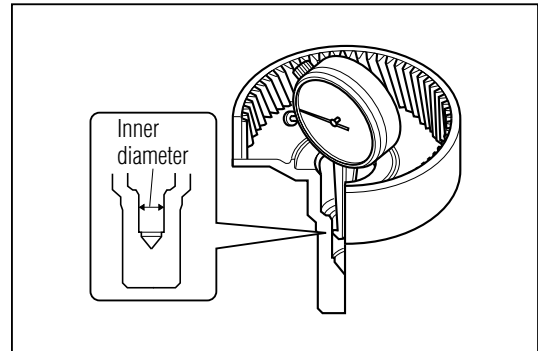
3. Measure the inner diameter of the planetary output shaft subassembly, using an inner caliper gauge.

Specified Value: 13.00 - 13.02 mm

Allowable Limit: 13.07 mm

NOTE:

- Perform the measurement at several points. Calculate the mean value.
- If the measured value exceeds the allowable limit, replace the planetary output shaft subassembly with a new one. Moreover, when replacing it, be sure to check the bush contacting surface of the planetary output shaft subassembly for scratch or discoloration. If the surface is scratched or discolored, replace the planetary output shaft subassembly with a new part.

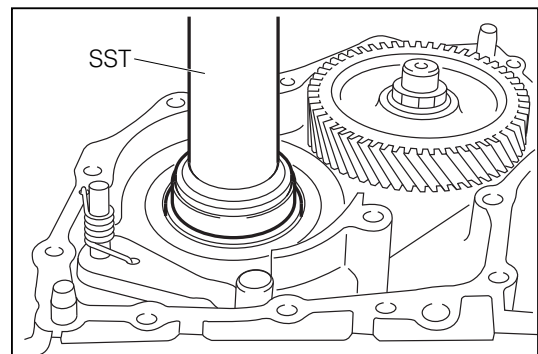


MAT00066-00065

4. Installation of planetary output shaft subassembly and reduction drive gear.

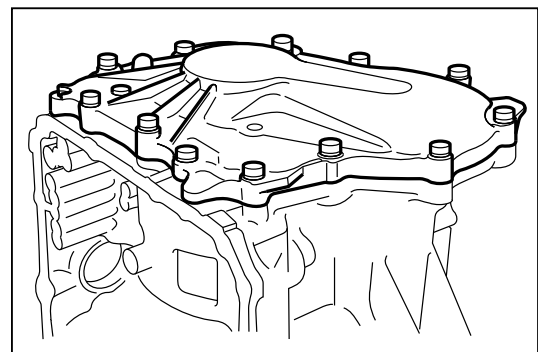
- (1) Install the radial ball bearing to the transaxle case, using the following SST.

SST: 09310-87301-000



MAT00067-00066

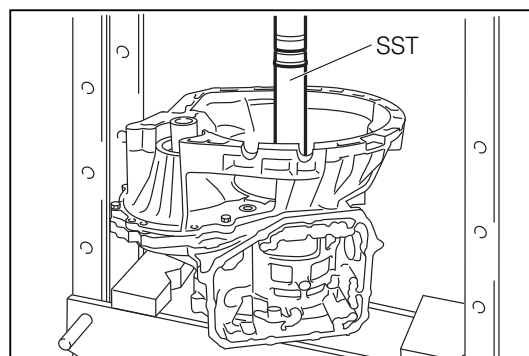
- (2) To prevent the reduction drive gear from dropping, temporarily install the rear transmission case cover subassembly by 13 bolts.



MAT00068-00067

- (3) Insert the planetary output shaft subassembly into the reduction drive gear subassembly, until you feel the resistance of the spline with your hand.
- (4) Drive the reduction drive shaft subassembly, using the following SST.

SST: 09309-87301-000

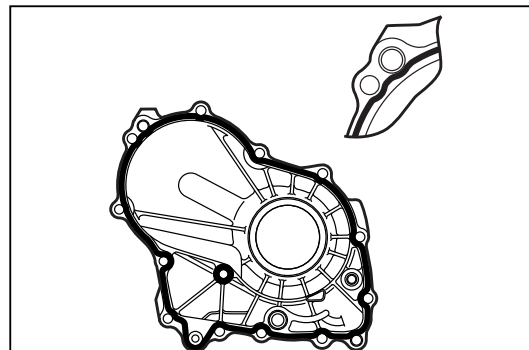


MAT00069-00068

- (5) Remove the rear transmission case subassembly.
5. Installation of rear transmission case cover subassembly
 - (1) Thoroughly remove any foreign matters (seal bond, grease, water, etc.) from both the mating surfaces of the transmission case and the rear transmission case subassembly.
 - (2) Apply Three Bond TB1281B to the surface of the transmission case in such a way that a sealing may be formed without any discontinued spot, in a size equivalent to a 0.5 mm to 1.5 mm diameter, following the procedure given in the right figure.

NOTE:

- If the seal bond is applied in an excessive amount, the sealing agent may mix with the ATF, resulting in a restricted strainer. Therefore, care must be exercised not to apply the seal bond excessively.

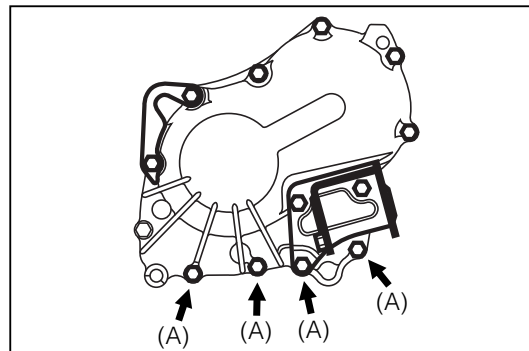


MAT00070-00069

- (3) Tighten the 13 bolts with the 2 brackets
- Tightening Torque: 14.7 - 21.6 N·m

NOTE:

- Be sure to tighten the bolts alternately and diagonally.
- Use 4 new seal bolts at the (A) sections.



MAT00071-00070

6. Install the planetary gear assembly.
 - (1) Install the thrust needle roller bearing to the planetary output shaft subassembly.

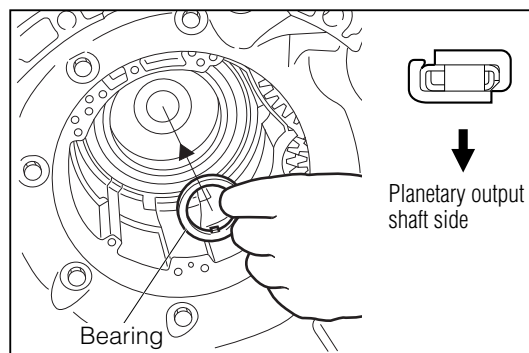
Reference Value:

Thrust needle roller bearing dimension:

Refer to page AT-5.

NOTE:

- Make sure that the thrust needle roller bearing is assembled in the correct direction.

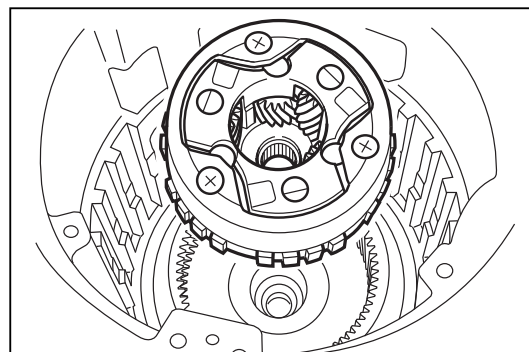


MAT00072-00071

- (2) Apply ATF to the surface of each gears and install the planetary gear assembly.

NOTE:

- Ensure that the assembly rotates smoothly.



MAT00073-00072

7. Installation of 1st & reverse brake

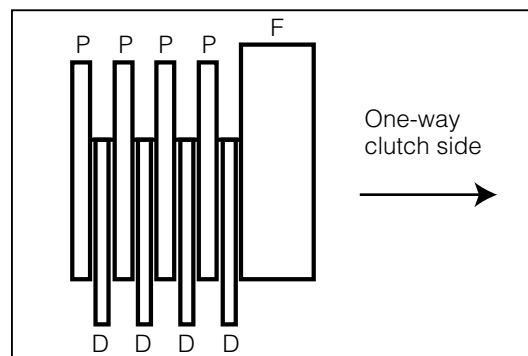
(1) Install the brake flanges, plates and discs in the following order.

F = Brake flange, P = Brake plate, D = Brake disc

P → D → P → D → P → D → P → D → F

NOTE:

- Before assembling new discs, soak them in the ATF for at least two hours.
- Be sure to align the cut-out section of the brake plate with the protruding section of the transaxle when installing the brake plate.
- Install a new hole snap ring to the grooved section of the transaxle case.



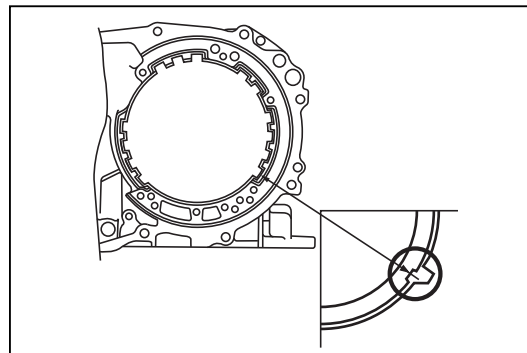
MAT00074-00073

(2) Coat the sliding section of the one-way clutch and planetary gear assembly with the ATF.

(3) Install the one-way clutch with the planetary gear assembly.

NOTE:

- Ensure that the one-way clutch with the snap ring faces toward the upside.
- Align the cut-out section at the inside of the transaxle case with the protruding section provided with the match mark of the one-way clutch.



MAT00075-00074

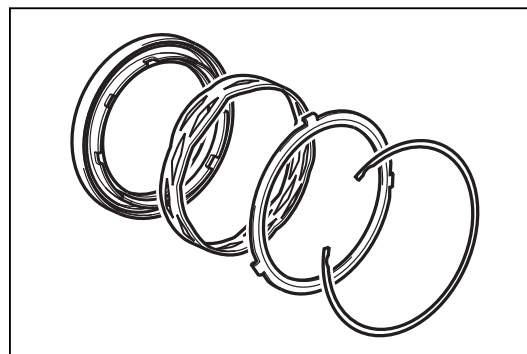
8. Installation of the 2nd & 4th piston

(1) Apply ATF to the outer periphery of the new brake piston and to the inserted section of brake piston of the transaxle case.

(2) Assemble the 2nd & 4th piston and cylinder.

NOTE:

- Be sure to insert the piston vertically.



MAT00076-00075

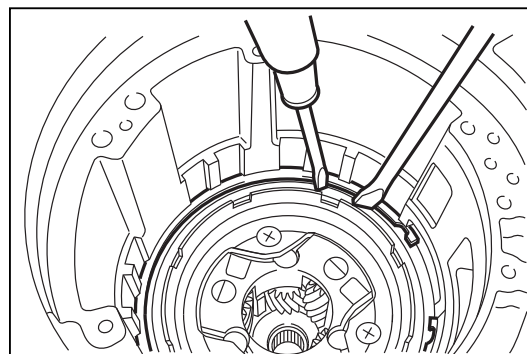
(3) Insert the new brake piston subassembly, piston return spring into the transaxle case.

(4) Insert the piston return spring seat in the right direction.

(5) Assemble the hole snap ring using snap ring pliers and 2 flat drivers.

NOTE:

- Be sure to align the cut-out section of the brake plate with the protruding section of the transaxle when installing the brake plate.
- Make certain to assemble the snap ring in such a way that its end gap faces upward of the unit.



MAT00077-00076

9. Installation of 2nd & 4th brake

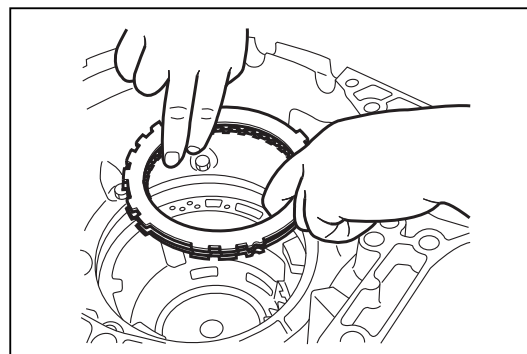
(1) Install the brake flanges, plates and discs in the following order.

F = Brake flange, P = Brake plate, D = Brake disc

F → D → P → D → P → D → F

NOTE:

- Before assembling new discs, soak them in the ATF for at least two hours.
- Be sure to align the cut-out section of the brake plate with the protruding section of the transaxle when installing the brake plate.
- Install a new hole snap ring to the grooved section of the transaxle case.



MAT00078-00077

10. Checking of 1st & reverse brake and 2nd & 4th brake end play

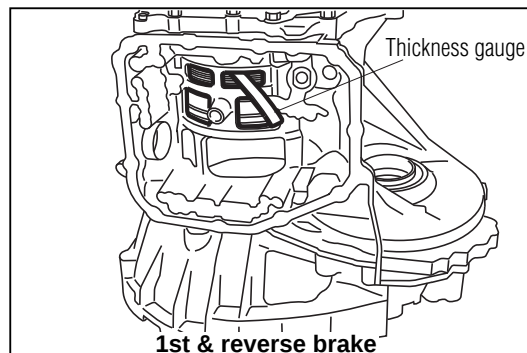
(1) Turn over the transaxle case.

(2) Measure the 1st & reverse brake and 2nd & 4th brake end play, using a flat thickness gauge.

Specified Value:

1st & reverse brake: 0.69 - 1.18 mm

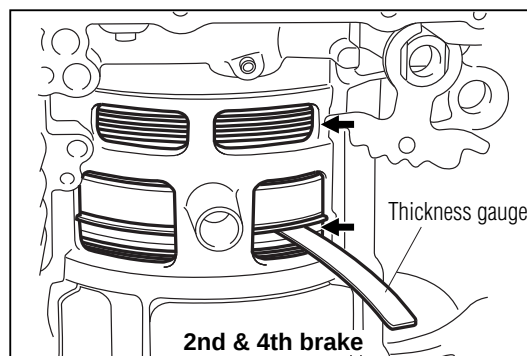
2nd & 4th brake: 1.08 - 1.53 mm



MAT00079-00078

NOTE:

- The tightness which you encounter during this insertion/withdrawal of the flat thickness gauge should be virtually the same as the tightness which you would encounter during the thickness adjustment of the valve rocker arm.
- If the measured end play fails to conform to the specified value above, select a snap ring from the table, of the step 1..



MAT00080-00079

11. Installation of rear planetary sun gear subassembly

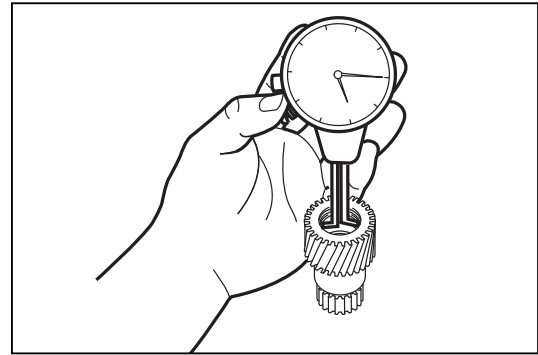
- (1) Measure the bush bore diameter of the rear planetary sun gear subassembly.

Specified Value: 18.00 - 18.02 mm

Allowable Limit: 18.07 mm

NOTE:

- The measurement should be performed at several points. Determine the mean value.
- If the bore diameter exceeds the allowable limit, replace the rear planetary sun gear subassembly.
- When replacing the rear planetary sun gear subassembly, be sure to check the bush contacting surface of the intermediate shaft subassembly. If the contacting surface is scored or discolored, replace the intermediate shaft subassembly, too, with a new one at the same time.

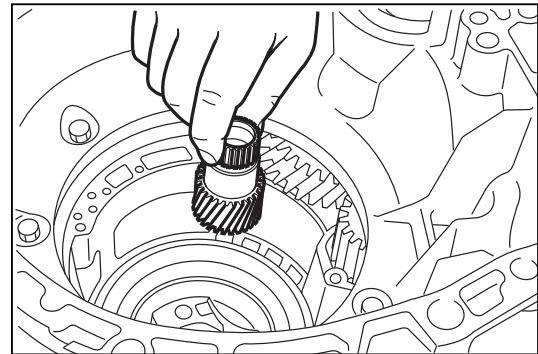


MAT00082-00080

- (2) Install the rear planetary sun gear subassembly to the planetary gear assembly.

NOTE:

- Apply ATF to the bush section.



MAT00083-00081

12. Installation of the front planetary sun gear assembly, forward clutch hub and intermediate shaft subassembly

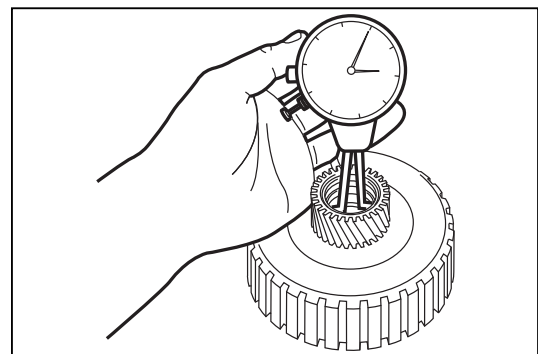
- (1) Measure the bush bore diameter of the front planetary sun gear subassembly.

Specified Value: 27.00 - 27.02 mm

Allowable Limit: 27.07 mm

NOTE:

- The measurement should be performed at several points. Determine the mean value.
- If the bore diameter exceeds the allowable limit, replace the front planetary sun gear subassembly.
- When replacing the front planetary sun gear subassembly, be sure to check the bush contacting surface of the rear planetary sun gear subassembly. If the contacting surface is scored or discolored, replace the rear planetary sun gear subassembly with a new one, too, at the same time.



MAT00084-00082

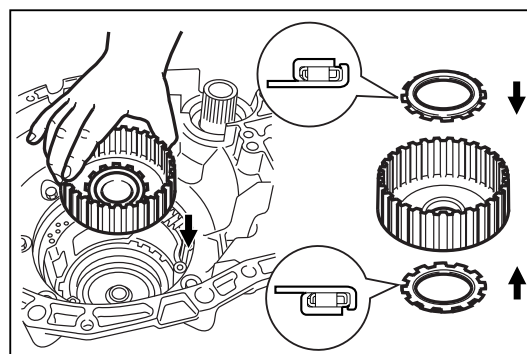
- (2) Assemble the front planetary sun gear assembly with the two thrust needle roller bearings to the planetary gear assembly.

NOTE:

- Apply ATF to the bush section.
- Make sure that the two thrust needle roller bearings are assembled in the correct direction.
- Assemble by aligning the pawls of the clutch disc of the 2&4 brake with the groove of the planetary sun gear assembly hub

REFERENCE:

- Dimensions of thrust needle roller bearing: Refer to page AT-5.



MAT00085-00083

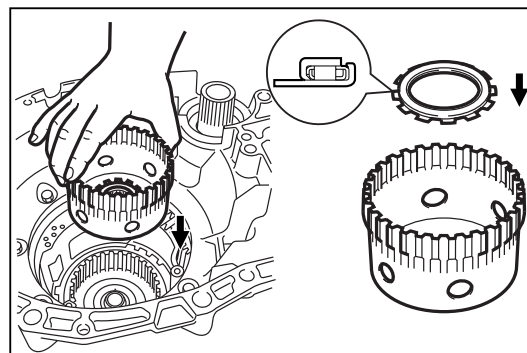
- (3) Assemble the forward clutch hub with the thrust needle roller bearing to the planetary sun gear assembly.

NOTE:

- Apply ATF to the forward clutch hub.
- Make sure that the thrust needle roller bearing is assembled in the correct direction.

REFERENCE:

- Dimensions of thrust needle roller bearing: Refer to page AT-5.



MAT00086-00084

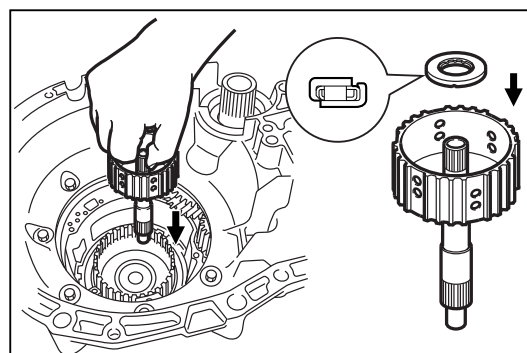
- (4) Assemble the Intermediate shaft subassembly with the thrust needle roller bearing to the forward clutch hub.

NOTE:

- Apply ATF to the Intermediate shaft subassembly.
- Make sure that the thrust needle roller bearing is assembled in the correct direction.

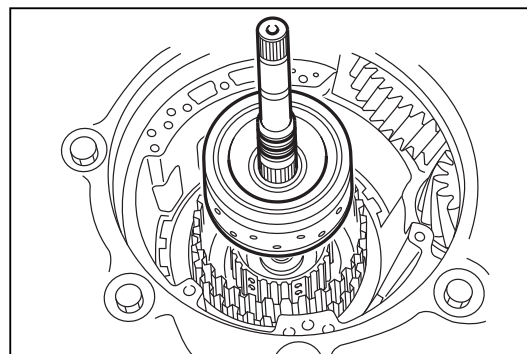
REFERENCE:

- Dimensions of thrust needle roller bearing: Refer to page AT-5.



MAT00087-00085

13. Installation of the rear multiple clutch assembly
Align the pawls of the clutch disc of the rear multiple clutch assembly with each other.
Assemble the rear multiple clutch by aligning the pawls of the clutch disc of the rear multiple clutch assembly with the groove of the forward clutch hub and with the groove of the intermediate shaft subassembly.



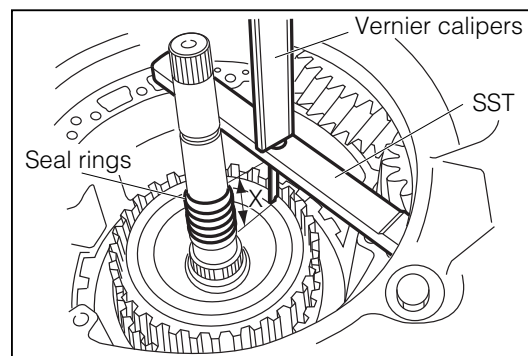
MAT00088-00086

14. Measure the height of the rear multiple clutch assembly between the installation section of the oil pump using the following SST & vernier calipers.

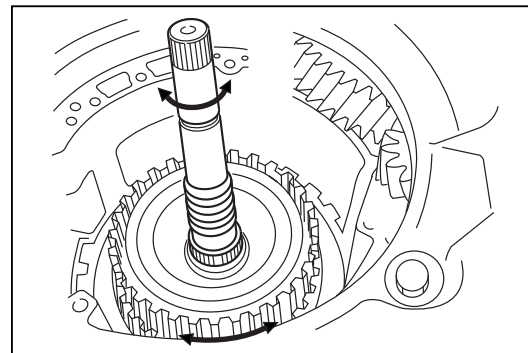
SST: 09350-87202-000 (09351-87208-000)

Specified Value: Approx. 43 mm

Dimension X: Distance between oil pump contact surface and rear multiple clutch assembly.



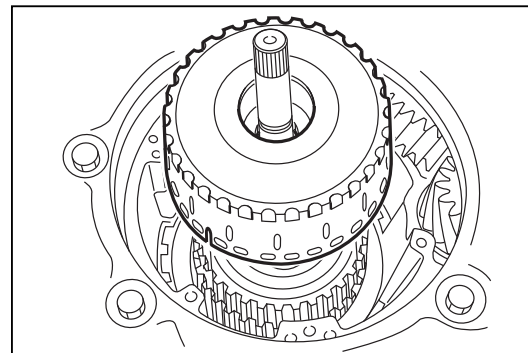
MAT00089-00087



MAT00090-00000

15. Turn the forward clutch clockwise and counterclockwise. At this time, ensure that the forward clutch turns lightly and the planetary sun gear assembly makes a relative movement with the forward clutch.

16. Installation of front multiple clutch assembly
- (1) Measure and record the thickness of the thrust needle roller bearing.
 - (2) Install the front multiple clutch assembly to the forward clutch drum and the planetary sun gear assembly as turning clockwise and counterclockwise.



MAT00091-00088

NOTE:

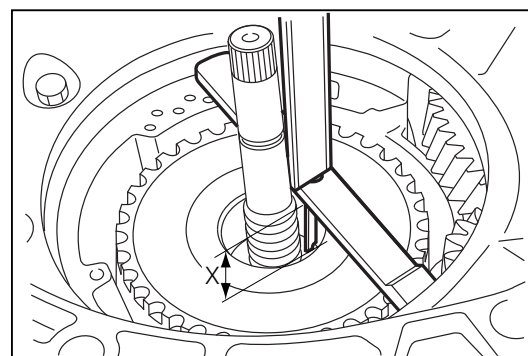
- Be careful not to damage the seal rings of the rear multiple clutch assembly.

- (3) Confirm the height of the oil pump attaching surface from the front multiple clutch assembly upper surface, using the following SST.

SST: 09350-87202-000 (09351-87208-000)

Specified Height: Approx. 43.5 mm

Dimension X: Distance between oil pump contact surface and rear multiple clutch assembly.



MAT00092-00089

NOTE:

- Perform the measurement at several points. Be sure to use the minimum value measured.
- If the measured value is less than 43.5 mm, the two pawls of the clutch disc are probably not fitted into the groove of the forward clutch drum or the planetary sun gear assembly. Be sure to perform the operation of the step (3) above again.

(4) Install the thrust needle roller bearing.

NOTE:

- Make sure that the thrust needle roller bearing is assembled in the correct direction.

17. Inspection of stator shaft & oil pump assembly

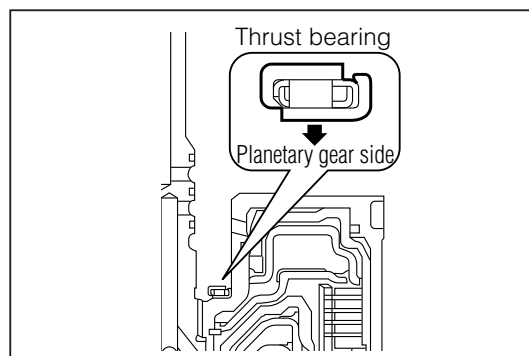
(1) Inspection of oil pump operation

Ensure that the oil pump drive gear rotates smoothly, using the following SST.

SST: 09350-87202-000 (09351-87206-000)

NOTE:

- Be sure to insert the flat sections (2 points) of the SST into the flat sections of the oil pump drive gear.



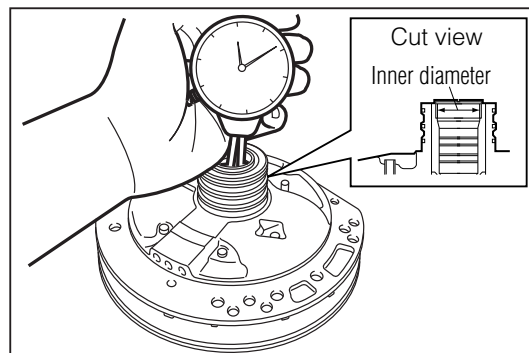
MAT00093-00090

(2) Measure the inner diameter of the oil pump bush section, using an inner caliper gauge.

Allowable Limit: $\phi 23.52$ mm

NOTE:

- Perform the measurement at several points. Calculate the mean value.
- If the actually measured value exceeds the allowable limit, replace the stator shaft & oil pump assembly with a new one.
- When replacing it, be sure to check the bush contacting surface of the input shaft subassembly. If the surface is scratched or discolored, replace the shaft with a new one, too.



MAT00094-00091

18. Assembly of stator shaft & oil pump assembly

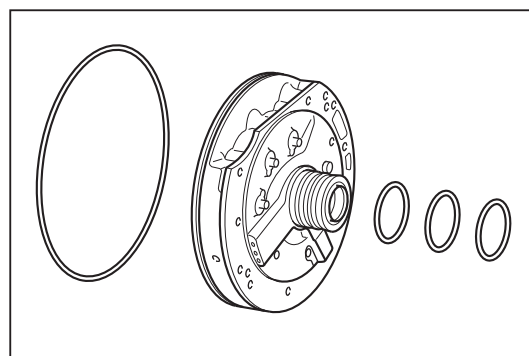
(1) Coat 3 new clutch drum oil seal rings with the ATF and install it to the stator shaft & oil pump assembly.

NOTE:

- Do not spread the new oil seal rings excessively.

(2) Coat and install the new O-ring.

(3) Assemble the stator shaft & oil pump assembly, following the procedure given in the steps 16-(1) through 16-(8).

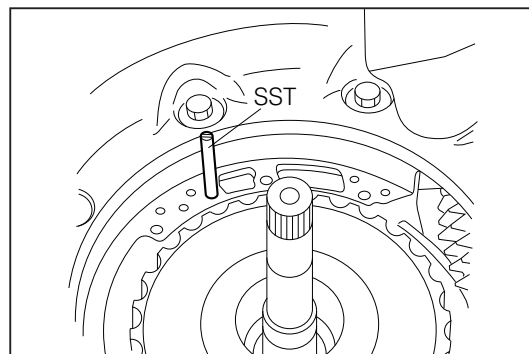


MAT00095-00092

19. Installation of stator shaft & oil pump assembly

(1) Install the following SST to the transaxle case.

SST: 09350-87202-000 (09351-87207-000)



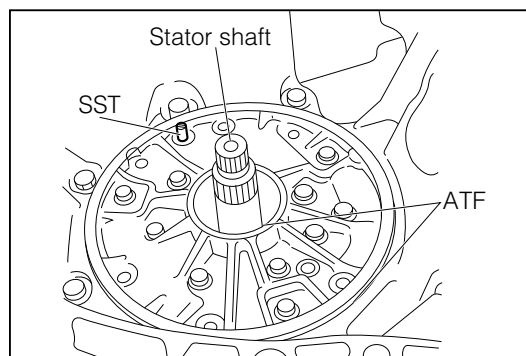
MAT00096-00093

AT-28

- (2) Apply the ATF to the outer periphery of the stator shaft & oil pump assembly and install it to the transaxle case.

NOTE:

- Be very careful not to damage or twist the O-ring during the installation.



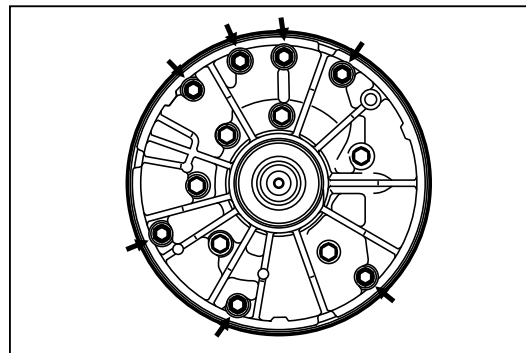
MAT00097-00094

- (3) Tighten the 7 bolts of the stator shaft & oil pump assembly.

Tightening Torque: 6.9 - 9.8 N·m

NOTE:

- Be sure to tighten the bolts alternately and diagonally.



MAT00098-00095

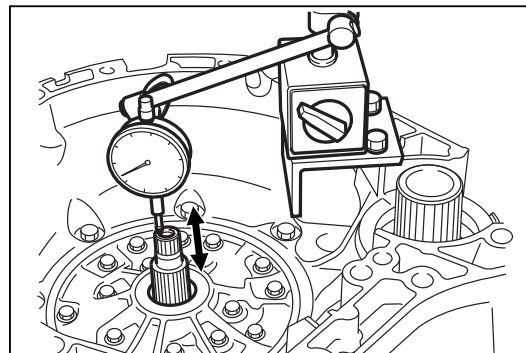
- (4) Measure the input shaft end play with a dial gauge and the following SST.

SST: 09350-87202-000 (09351-87210-000)

Specified Value: 0.26 - 0.88 mm

NOTE:

- If the measured end play exceeds the specified value, remove the stator shaft & oil pump assembly from the transaxle case. Then, select the thickness of the thrust bearing race from the right lower table. Proceed to perform the operations of the steps from 16-(4) to 19-(4).



MAT00099-00096

Thrust bearing availability

Thrust bearing thickness mm	Part No.	Color
3.41	90043-74044-000	Brown
3.81	90043-74043-000	—
4.21	90043-74045-000	Black

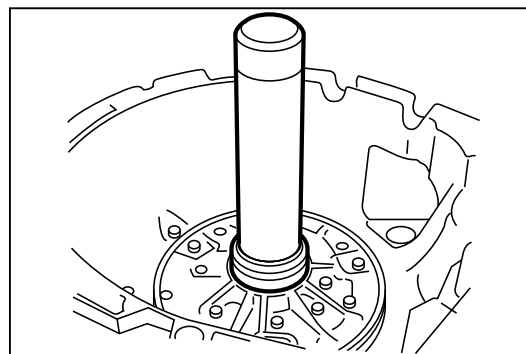
MAT00173-00000

- (5) Install a new T-type oil seal, using the following SST.

SST: 09310-87301-000

NOTE:

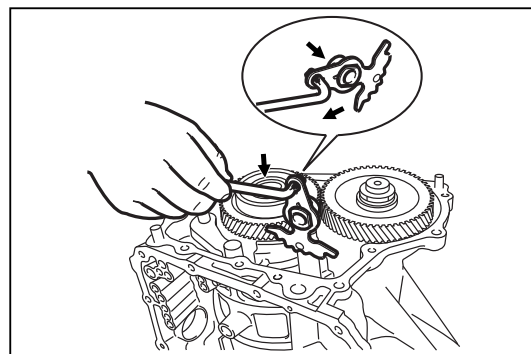
- Make sure that the T-type oil seal is in contact at right angles with the assembly.



MAT00100-00097

20. Installation of manual valve lever shaft assembly

- (1) Install the cut-out groove of the manual valve lever and the protruding section of the parking lock rod to the manual valve lever.

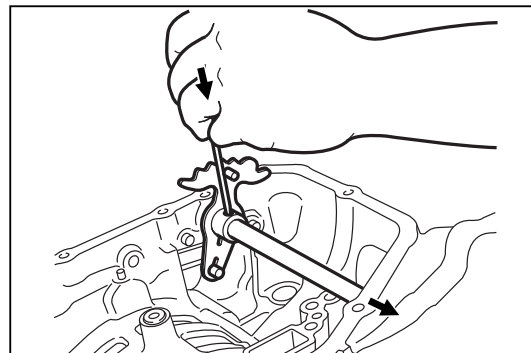


MAT00101-00098

- (2) Install the manual lever shaft subassembly from the engine side.
- (3) Install a new slotted spring pin, using a pin punch and a hammer.

NOTE:

- Be sure to install the pin, until it reaches the edge surface of the manual valve lever.



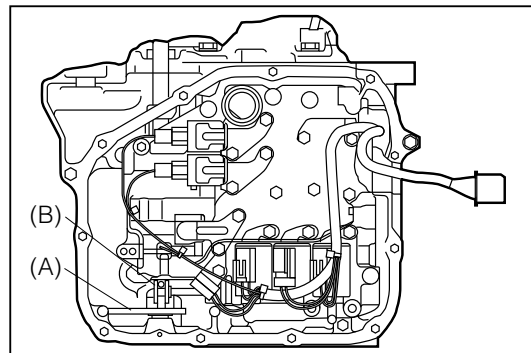
MAT00102-00099

21. Installation of the valve body assembly

- (1) Install the valve body assembly to the transaxle case.

NOTE:

- Ensure that the protrusion of the manual valve lever (A) and grooved section of the manual valve (B) are matched securely.



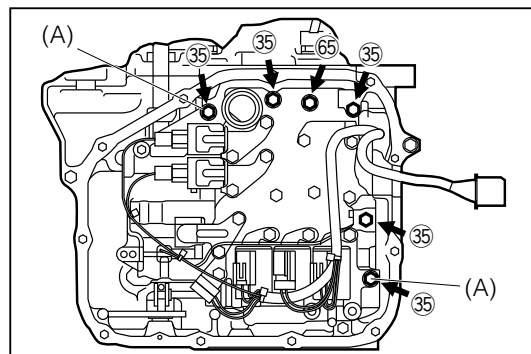
MAT00104-00101

- (2) Tighten the 2 bolts with the (A) mark in the right figure, and then tighten the other 4 bolts.

Tightening Torque: 6.9 - 9.8 N·m

NOTE:

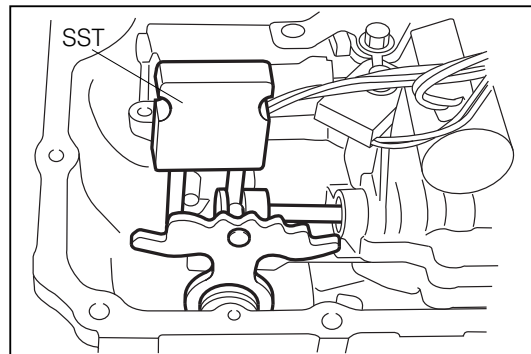
- The numeral in the right illustration indicates the nominal length of the bolt.



MAT00105-00102

- (3) Ensure that the manual valve operates smoothly and set it to the neutral position, using the following SST.

SST: 09350-87202-000 (09351-87211-000)



MAT00103-00100

- (4) First tighten the short bolt, and then tighten the other bolt of the manual detent spring.
Tightening Torque: 6.9 - 9.8 N·m

NOTE:

- The numeral in the right figure indicates the nominal length of the bolt.
- Be sure to tighten the bolts alternately.

- (5) Remove the SST that installed at 20-(1).

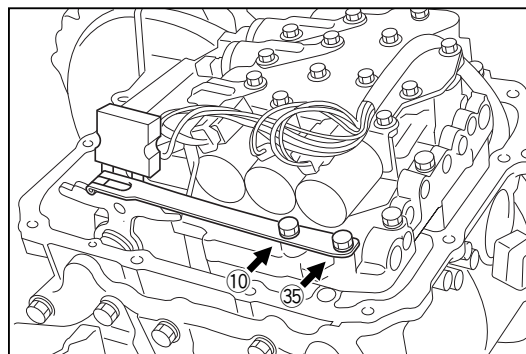
- (6) Install the the compression spring, bolt and plate.
Tightening Torque: 6.9 - 9.8 N·m

- (7) Install the new 2nd & 4th brake cylinder seal.

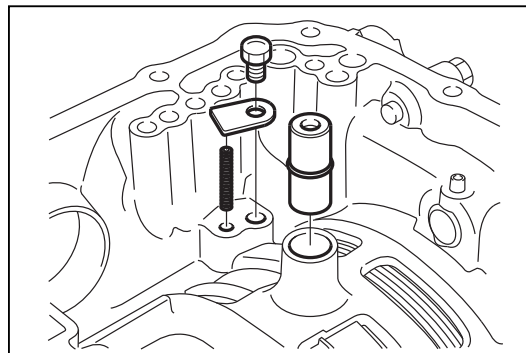
- (8) Apply ATF to the new O-ring. Install the oil strainer with the O-ring to the valve body assembly.

NOTE:

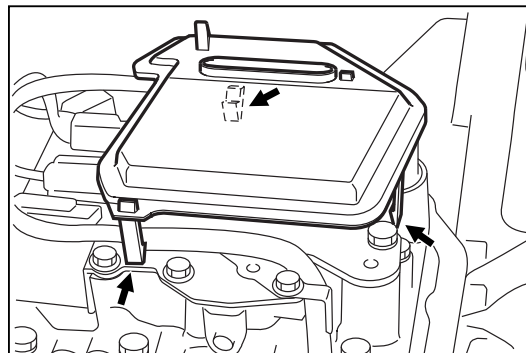
- Be sure that all 3 pawls are firmly set.



MAT00106-00103



MAT00107-00104



MAT00108-00105

22. Installation of transaxle oil pan subassembly

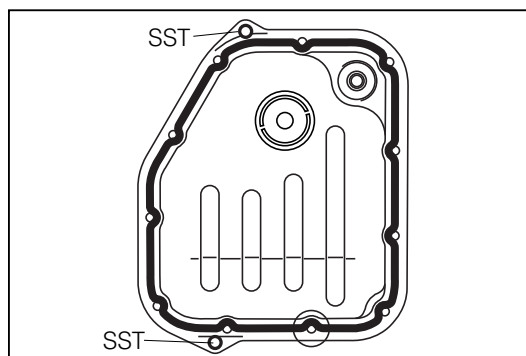
- (1) Install the following SST to the transaxle case.
SST: 09350-87202-000 (9351-87207-000)

- (2) Place the oil cleaner magnet in the protrusion of the transaxle oil pan subassembly.
(3) Thoroughly remove any foreign matter (grease and water, etc.) from both the transmission case and the transaxle oil pan subassembly
(4) Apply Three Bond TB1281B or equivalent to the surface of the transmission case in such a way that a sealing may be formed without any discontinued spot, in a size equivalent to a 1.5 mm to 2.5 mm diameter, following the procedure given in the right figure.

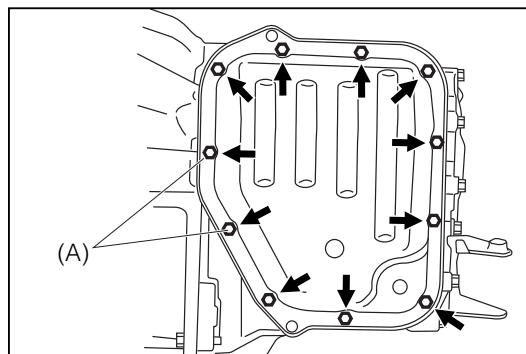
- (5) Tighten the 11 bolts
Tightening Torque: 6.9 - 9.8 N·m

NOTE:

- Be sure to tighten the bolts alternately and diagonally.
- Use 2 new seal bolts at the (A) sections.

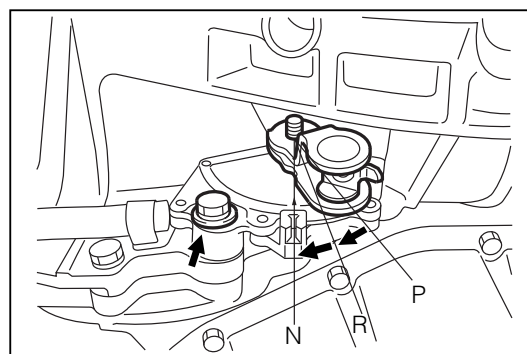


MAT00109-00106



MAT00110-00107

23. Adjustment of neutral start switch
 - (1) Temporarily tighten the bolt of the neutral start switch assembly.
 - (2) Place the transmission control shaft lever subassembly.
 - (3) Push the lever toward the front side (ie: P range).
 - (4) Back off the lever two notches to the NEUTRAL position.
 - (5) Remove the lever subassembly.

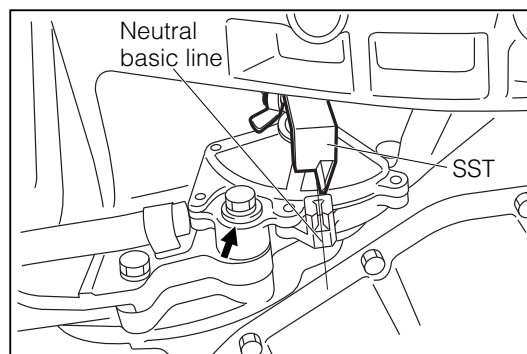


MAT00111-00108

- (6) Install the following SST.

SST: 09302-87201-000
- (7) Adjust the neutral start switch assembly until the neutral basic line on the SST should be aligned with SST above.
- (8) Tighten the bolt.

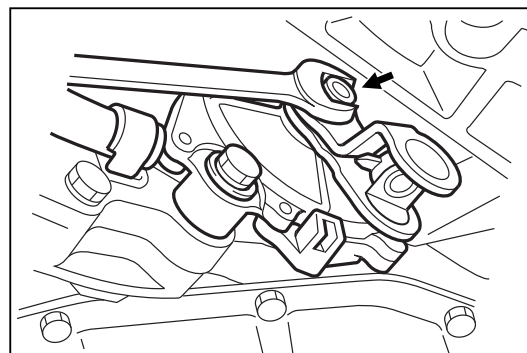
Tightening Torque: 14.7 - 21.6 N·m



MAT00112-00109

24. Tighten the lever subassembly with a nut.

Tightening Torque: 9.8 - 15.7 N·m

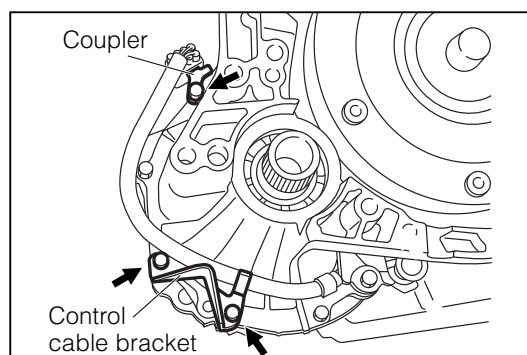


MAT00113-00110

25. Tighten the bolt of neutral switch coupler and snap the neutral start switch together.

Clamp the neutral start switch cable by tightening the 2 bolts of the control cable bracket.

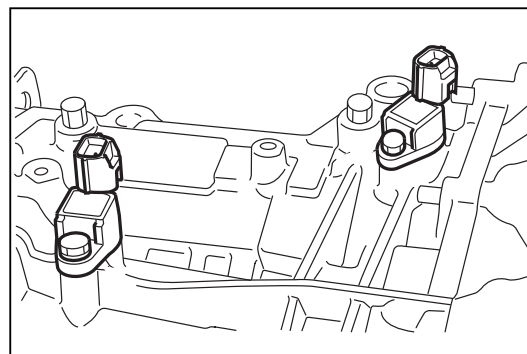
Tightening Torque: 14.7 - 21.6 N·m



MAT00114-00111

26. Installation of the 2 speed sensors.
 - (1) Coat the new O-ring section of the 2 transmission revolution sensor with the ATF and insert the 2 transmission revolution sensor into the transaxle case.
 - (2) Tighten the bolt.

Tightening Torque: 6.9 - 9.8 N·m

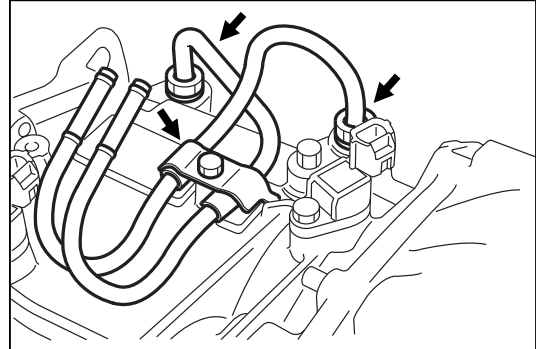


MAT00115-00112

27. Installation of the transmission solenoid connector.
- (1) Connect the transmission solenoid connector.
 - (2) Coat ATF to the new O-ring section, and insert the connector to the transaxle case.
 - (3) Tighten the bolt.
- Tightening Torque: 6.9 - 9.8 N·m

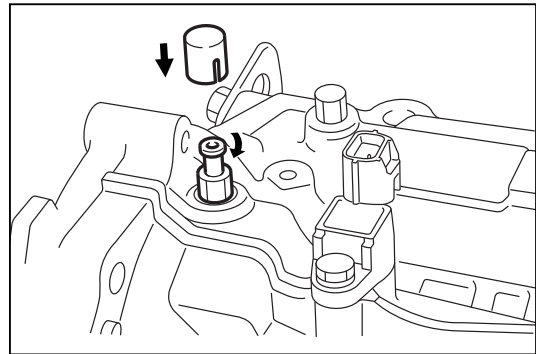
MAT00116-00000

28. Installation of the oil cooler tube and oil cooler tube clamp
- (1) Temporary tighten the new unions (for the oil cooler).
 - (2) Install the oil cooler tube clamp by tightening the bolt.
- Tightening Torque: 6.9 - 9.8 N·m
- (3) Tighten the new unions to the specified torque.
- Tightening Torque: 29.4 - 39.2 N·m



MAT00117-00113

29. Tighten the breather union and install the breather cap.
- Tightening Torque: 2.9 - 9.8 N·m



MAT00118-00114

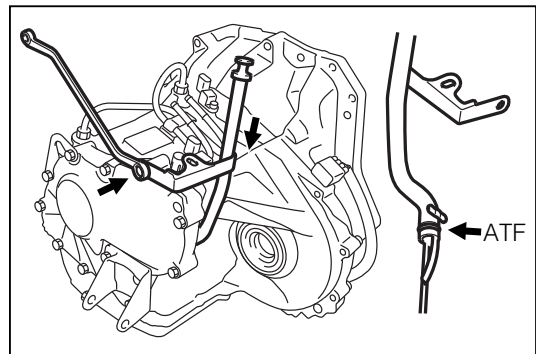
30. Coat a new O-ring with the ATF and install it to the transmission oil filler tube subassembly.

NOTE:

- Be very careful not to twist or damage of the O-ring during installation.

31. Insert the transmission oil filler tube subassembly to the transaxle case and tighten it with the bolt.

Tightening Torque: 14.7 - 21.6 N·m



MAT00119-00115

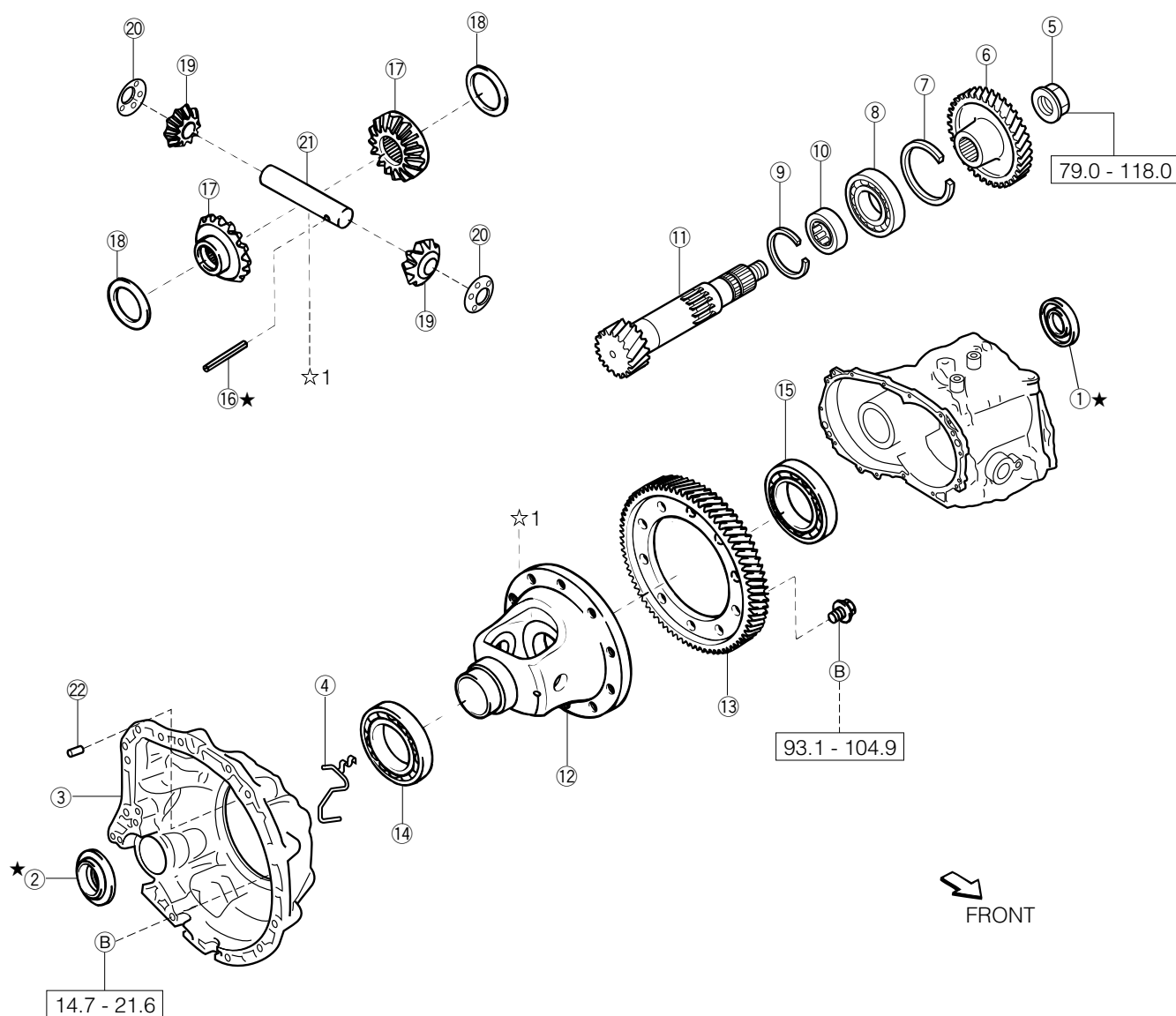
32. Install the transaxle case assembly to the vehicle.

NOTE:

- Be sure to follow instructions in the AT section of the Chassis Section.

MAT00120-00000

TORQUE CONVERTOR & DIFFERENTIAL CASE COMPONENTS



 : Tightening torque
 ★ : Non-reusable parts
 Unit : N·m

- ① T-type oil seal
- ② T-type oil seal
- ③ Torque converter & differential case
- ④ Differential gear lubrication apply tube
- ⑤ Lock nut
- ⑥ Primary reduction drive gear
- ⑦ Hole snap ring
- ⑧ Radial ball bearing
- ⑨ Hole snap ring
- ⑩ Cylindrical roller bearing
- ⑪ Output shaft

- ⑫ Differential case
- ⑬ Differential ring gear
- ⑭ Radial ball bearing
- ⑮ Radial ball bearing
- ⑯ Slotted spring pin
- ⑰ Differential side gear
- ⑱ Differential side gear thrust washer
- ⑲ Differential pinion gear
- ⑳ Differential pinion gear thrust washer
- ㉑ Pinion shaft
- ㉒ Knock pin

AT-34

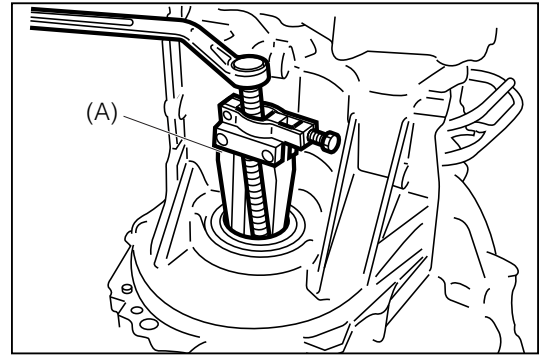
DISASSEMBLY

1. Remove the transaxle case assembly from the vehicle.
2. Remove the T-type oil seal, using the following SSTs.

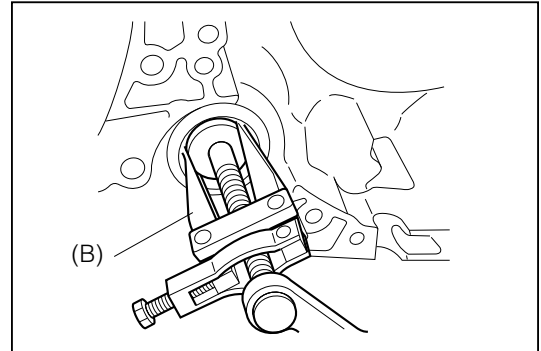
SSTs: 09308-10010-000 ... (A)
09950-20017-000 ... (B)

NOTE:

- Never reuse the removed oil seal.



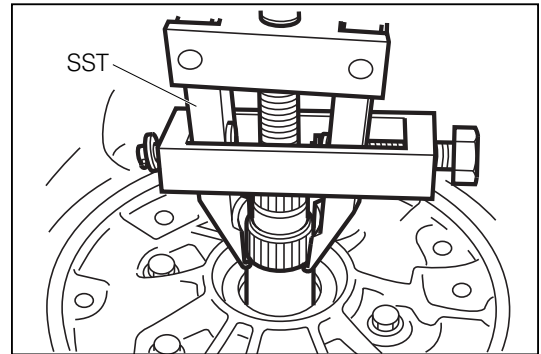
MAT00122-00117



MAT00000-00118

3. Remove the neutral start switch & oil pump assembly.
4. Install the following SST to the transaxle case.

SST: 09350-87202-000 (09351-87212-000)

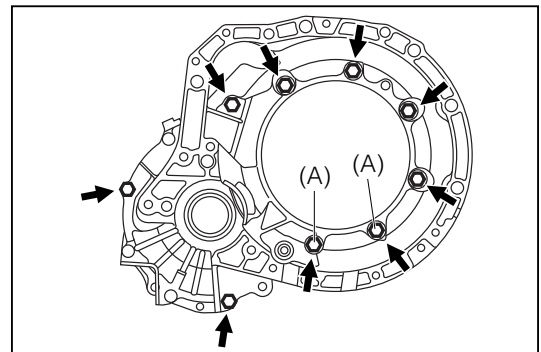


MAT00123-00119

5. Remove the nine bolts.

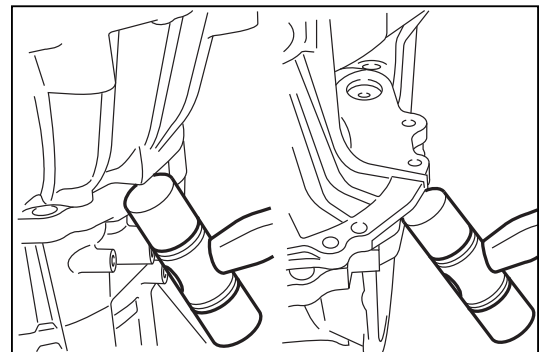
NOTE:

- Never reuse the removed 2 bolts (A) as illustrated in the right figure.



MAT00124-00120

6. Lightly and uniformly tap the two lib sections of the torque converter & differential case, using the plastic hammer and remove the torque converter & differential case.

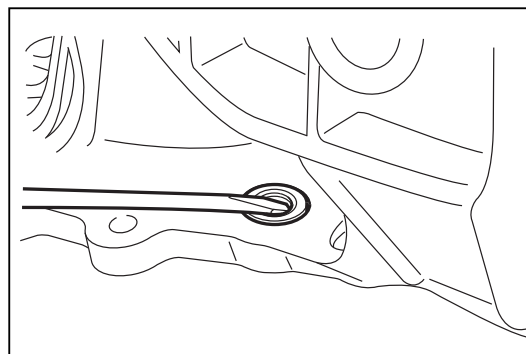


MAT00125-00121

7. Remove the T-type oil seal, using the flat driver.

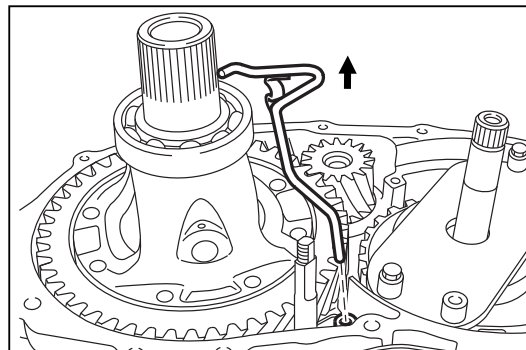
NOTE:

- Never reuse the removed oil seal.



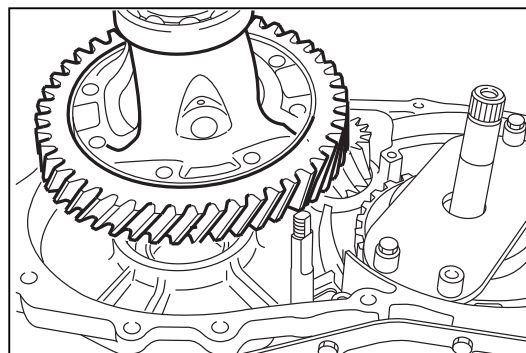
MAT00126-00122

8. Remove the differential gear lubrication apply tube.



MAT00127-00123

9. Remove the differential assembly.



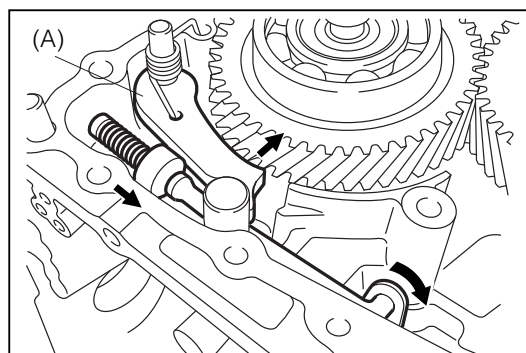
MAT00128-00124

10. Remove the rear transmission case cover subassembly.

11. Lock the reduction drive gear subassembly by moving the parking lock rod in the arrow headed direction.

NOTE:

- Ensure that the reduction drive gear subassembly should be locked with the parking lock pawl (A).

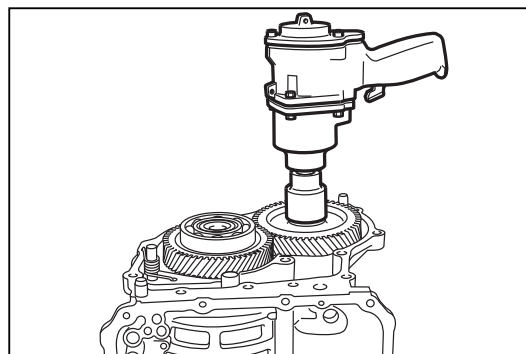


MAT00129-00125

12. Raise the locked section of the lock nut, using an air hammer.

NOTE:

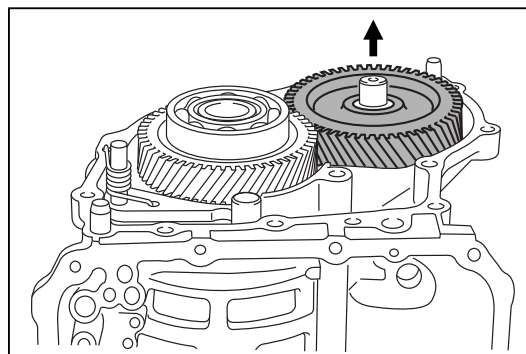
- Never reuse the removed lock nut.



MAT00130-00126

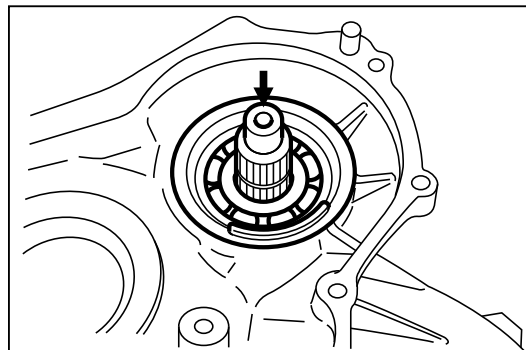
AT-36

13. Remove the primary reduction driven gear.



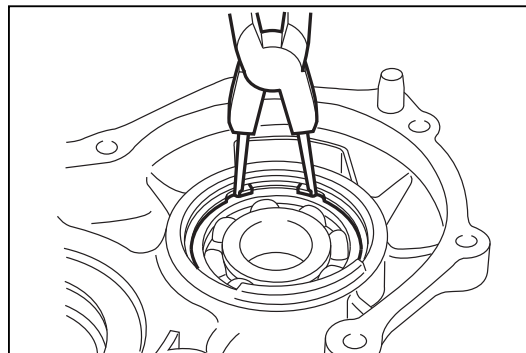
MAT00131-00127

14. Tap the output shaft lightly until the resistance of output shaft is free, using the brass bar and hammer and remove the output shaft.



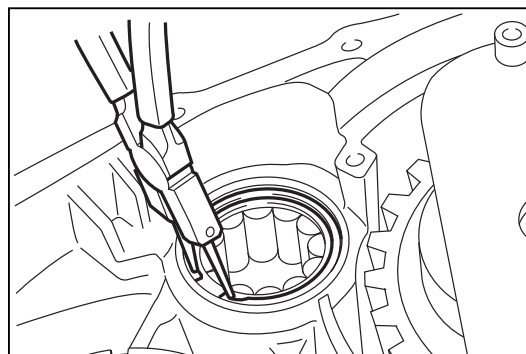
MAT00132-00128

15. Remove the hole snap ring, using the snap ring plier, and remove the radial ball bearing.



MAT00133-00129

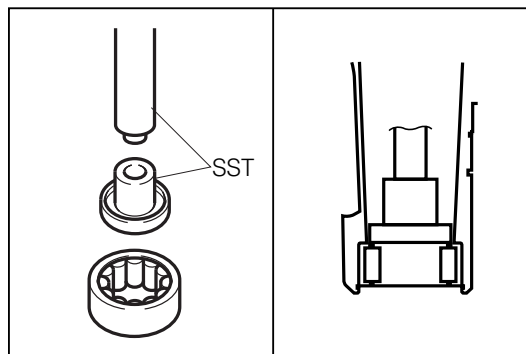
16. Remove the hole snap ring, using snap ring pliers.



MAT00134-00130

17. Remove the cylindrical roller bearing, using the following SSTs.

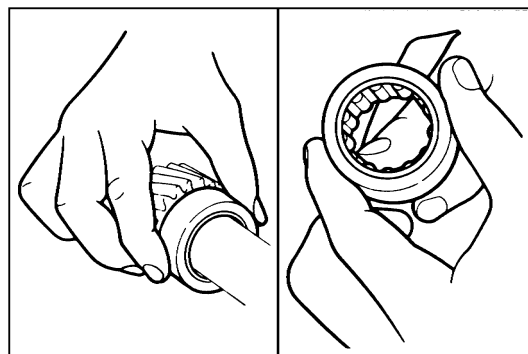
SSTs: 09215-00101-000



MAT00135-00131

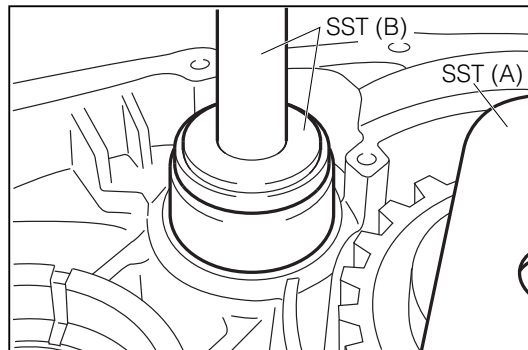
INSTALLATION

1. Ensure that the cylindrical roller bearing turns smoothly without any binding when turned.



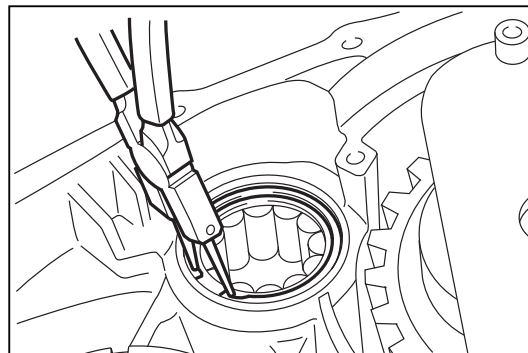
MAT00136-00132

2. Install the following SST to the transaxle case.
SST: 09350-87202-000 (09351-87212-000) ... (A)
3. Install the cylindrical roller bearing, using the following SSTs.
SSTs: 09608-30012-000 ... (B)



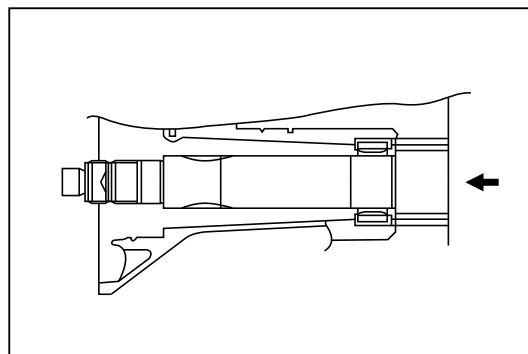
MAT00137-00133

4. Install the hole snap ring, using the snap ring plier.
NOTE:
 - Ensure that the ring should be installed to the groove section of the transaxle case.



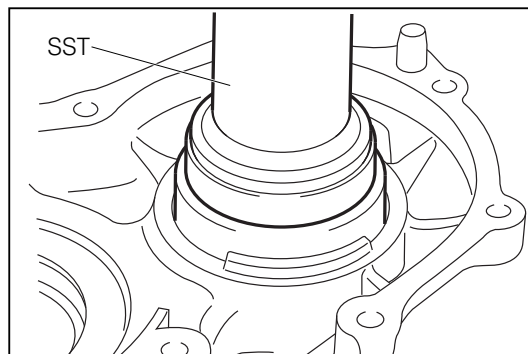
MAT00138-00134

5. Install the output shaft to the transaxle case.



MAT00139-00135

6. Install the bearing, using the following SST.
SST: 09310-87301-000



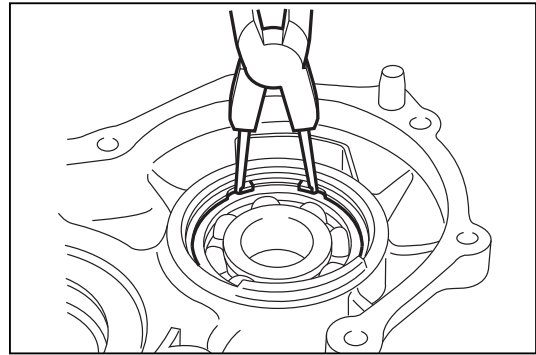
MAT00140-00136

AT-38

7. Install the hole snap ring, using snap ring pliers.

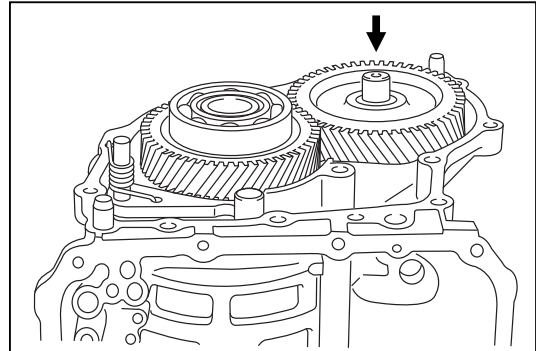
NOTE:

- Ensure that the ring should be installed to the groove section of the transaxle case.



MAT00141-00137

8. Unlock the parking lock pawl from the P range by releasing the parking lock pawl and install the primary reduction driven gear to the output shaft.

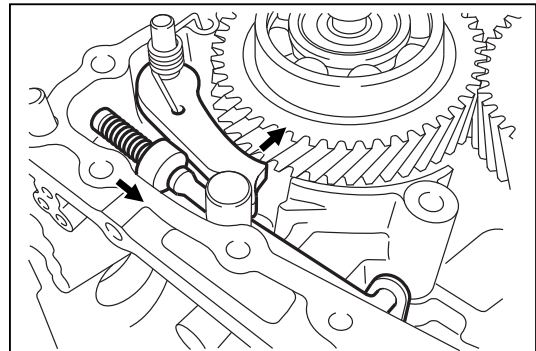


MAT00142-00138

9. Lock the parking lock pawl to the P range.

NOTE:

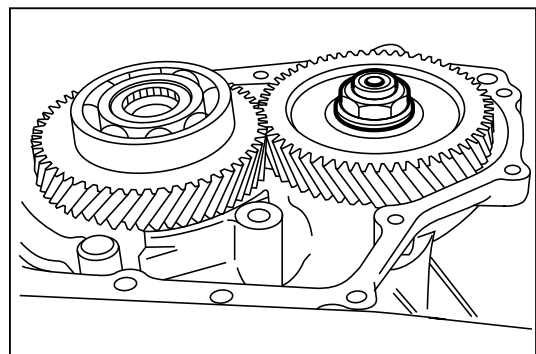
- Follow instructions in AT-35 disassembly 11.



MAT00143-00139

10. Tighten a new lock nut.

Tightening Torque: 79.0 - 118.0 N·m



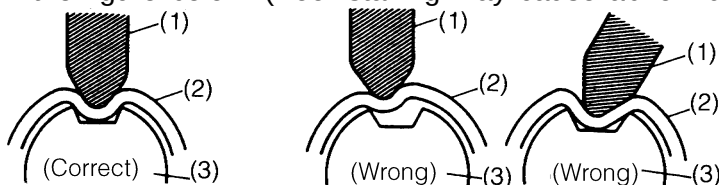
MAT00144-00140

11. Stake a new lock nut, using a punch and a hammer.

NOTE:

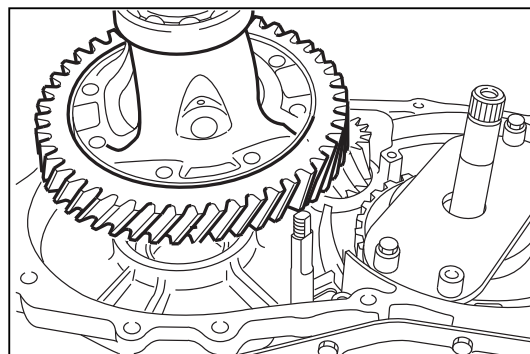
- When staking the lock nut, point a suitable staking tool toward the output shaft axis center and stake the lock nut securely, as shown in the figure below. (Poor staking may cause abnormal noise.)

- (1) Suitable staking tool
(2) New nut
(3) Shaft



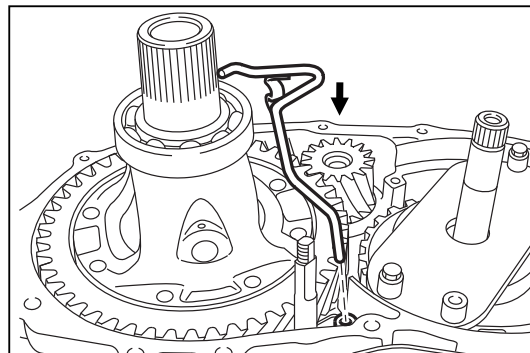
MAT00145-00141

12. Assemble the rear transmission case cover.
13. Install the differential assembly to the transaxle case.



MAT00146-00142

14. Install the differential gear lubrication apply tube.



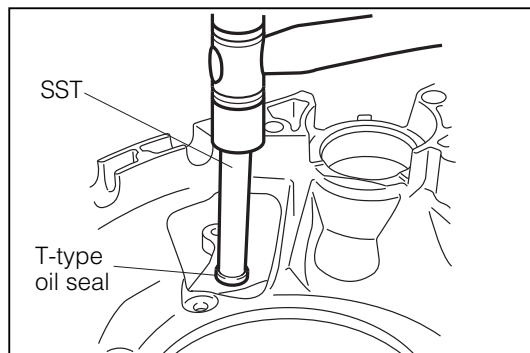
MAT00147-00143

15. Install the new T-type oil seal, using the following SST.

SST: 09301-87702-000

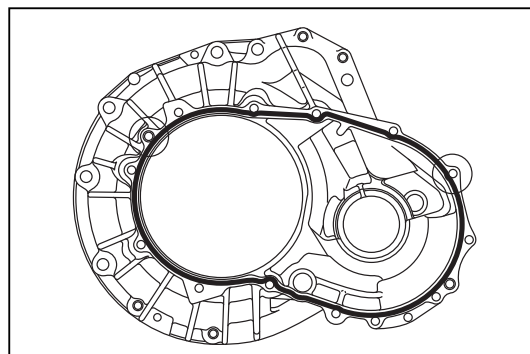
NOTE:

- When replacing the oil seal, remove the manual lever shaft first. Then replace the oil seal and install the shaft.



MAT00148-00144

16. Assembly of the torque converter & differential case
 - (1) Thoroughly remove any foreign matter (seal bond, grease and water, etc.) from both the transmission case and the torque converter & differential case.
 - (2) Apply Three Bond TB1281B or equivalent to the surface of the transmission case in such a way that a sealing may be formed without any discontinued spot, in a size equivalent to a 0.5 mm to 1.5 mm diameter, following the procedure given in the right figure.

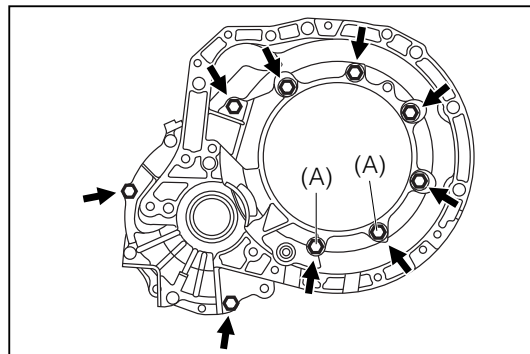


MAT00149-00145

- (3) Tighten the 9 bolts
Tightening Torque: 14.7 - 21.6 N·m

NOTE:

- Be sure to tighten the bolts alternately and diagonally.
- Use 2 new seal bolts A as illustrated in the right figure.

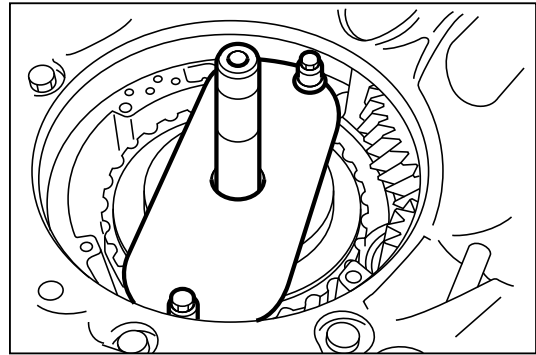


MAT00150-00146

AT-40

17. Remove the following SST from the transaxle case.

SST: 09350-87202-000 (09351-87212-000)

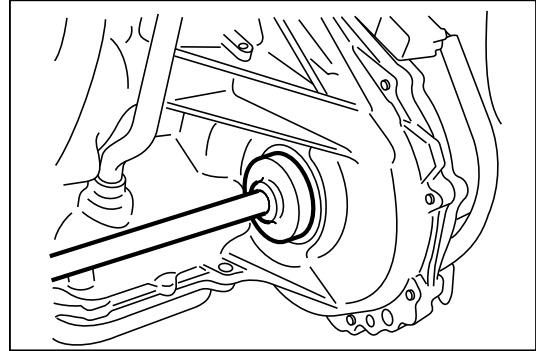


MAT00151-00147

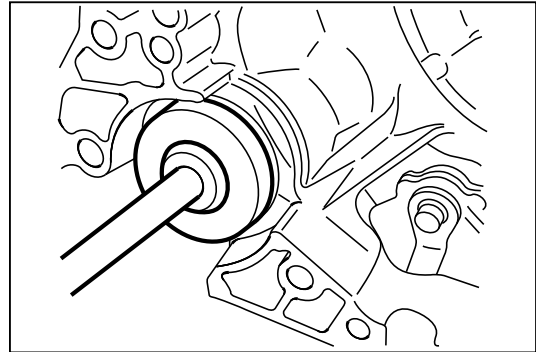
18. Install the new T-type oil seal, using the following SSTs.

SSTs: 09517-87205-000 ... (A) ... (for LH)

09517-87203-000 ... (B) ... (for RH)



MAT00152-00148



MAT00000-00149

19. Install the stator shaft & oil pump assembly.
20. Install and adjust the neutral start switch assembly.
21. Install the transaxle case assembly to the vehicle.
22. Operation check of shift lever position.
23. Install the drive shaft assembly.
24. Fill the new ATF.

CAUTION:

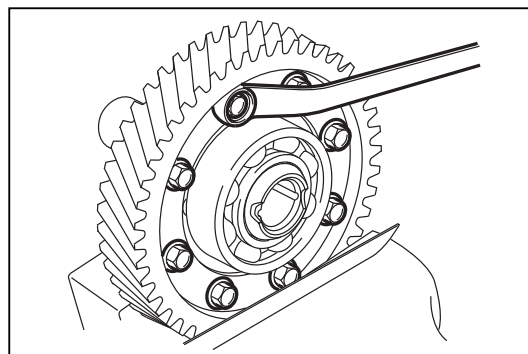
- Do not over fill the new fluid.

MAT00153-00000

DIFFERENTIAL

DISASSEMBLY

1. Remove the differential ring gear by removing the 8 bolts.



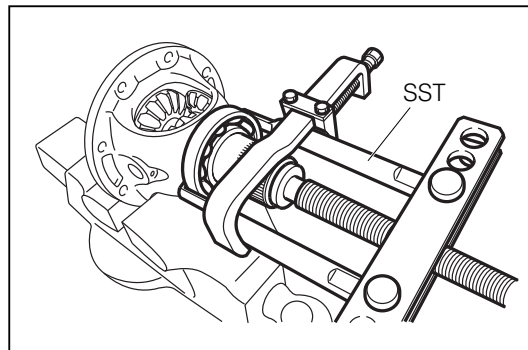
MAT00154-00150

2. Clamp the differential case in a vice, using the soft jaws.
3. Remove the 2 radial ball bearing, using the following SST.

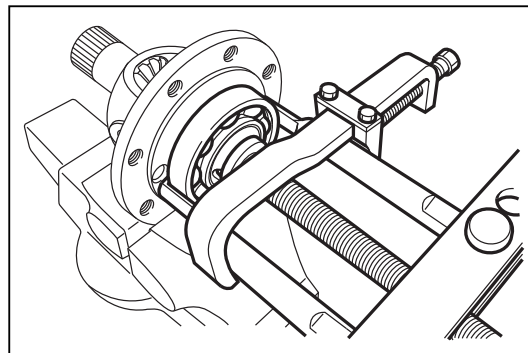
SST: 09950-20017-000

NOTE:

- Never reuse the removed bearing.



MAT00155-00151

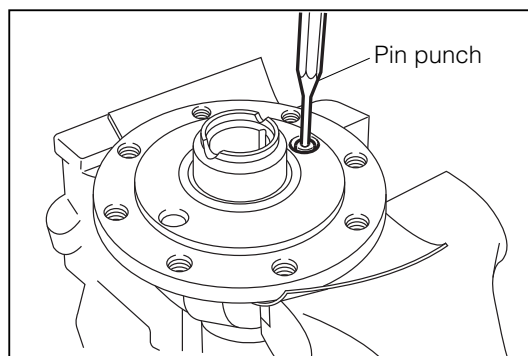


MAT00000-00152

4. Clamp the differential case in a vice, using the soft jaws and remove the slotted spring pin, using the pin punch and hammer.

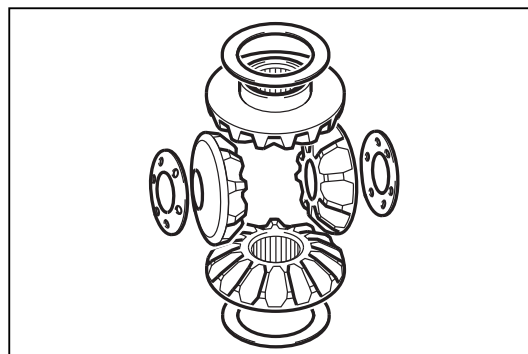
NOTE:

- Never reuse the removed slotted spring pin.



MAT00156-00153

5. Remove the differential pinion shaft from the differential case.
6. Remove the following parts.
 - (1) Differential side gear 2 pcs
 - (2) Differential side gear thrust washer 2 pcs
 - (3) Differential pinion gear 2 pcs
 - (4) Differential pinion gear thrust washer 2 pcs

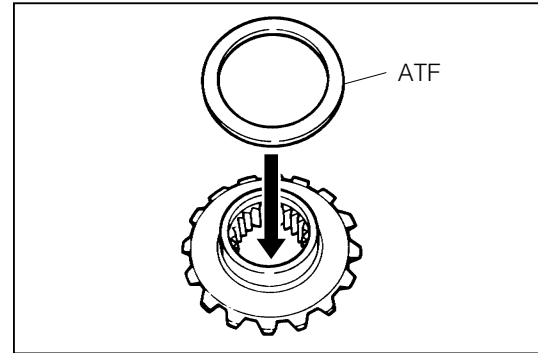


MAT00157-00154

AT-42

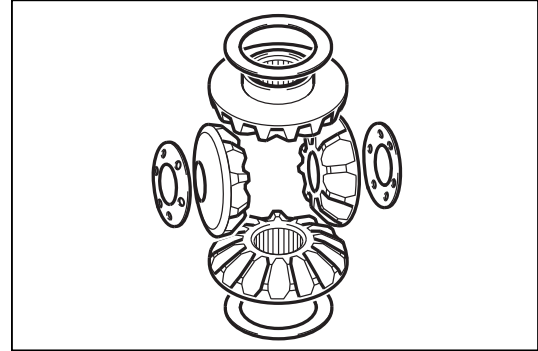
ASSEMBLY

1. Coat the differential side gear thrust washer with ATF and install it to the differential side gear.



MAT00158-00155

2. Install the aforesaid parts to the differential case.

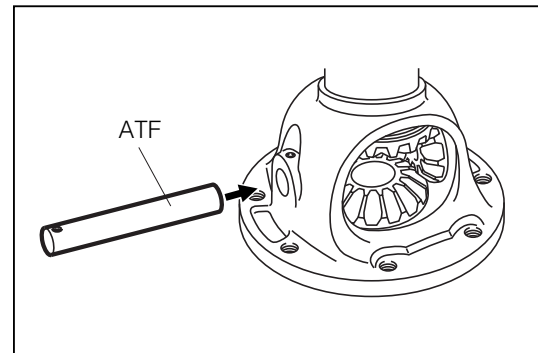


MAT00159-00156

3. Coat the differential pinion shaft with ATF and install it to the differential case.

NOTE:

- Ensure that the installation hole section of the slotted spring pin should be aligned with differential pinion shaft and differential case.

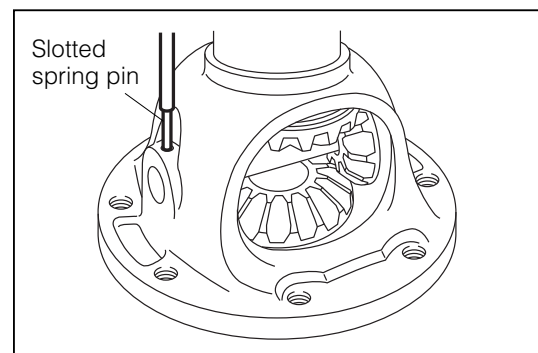


MAT00160-00157

4. Install the new slotted spring pin, using the pin punch and hammer.

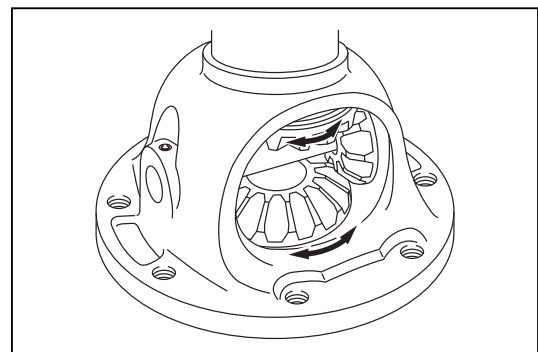
NOTE:

- Be sure to drive the new pin until the end surface of the differential case.



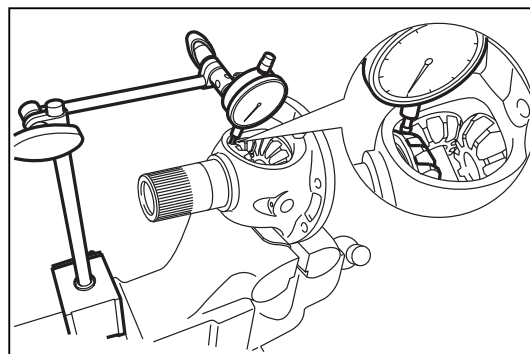
MAT00161-00158

5. Ensure that the differential side gear turns smoothly.



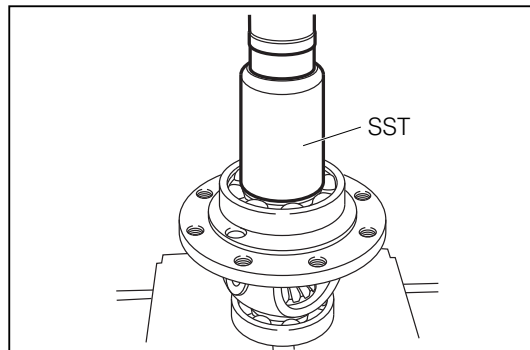
MAT00162-00159

6. Inspect the side gear backlash while pushing the pinion gear against the differential case side.
Specified Value: 0.02 - 0.2 mm



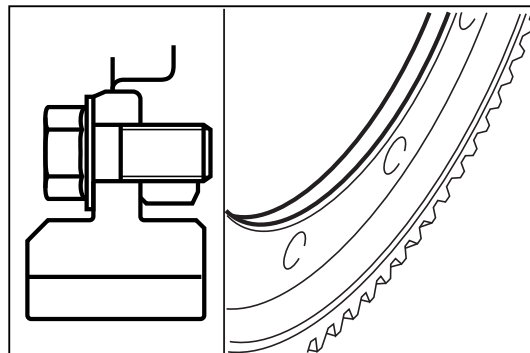
MAT00163-00160

7. Install the speedometer drive gear and press a new radial ball bearing (width: 15 mm), using the following SST.
SST: 09636-20010-000
8. To the differential case ring gear side, install a new radial ball bearing (width: 14 mm), using the following SST.
SST: 09636-20010-000



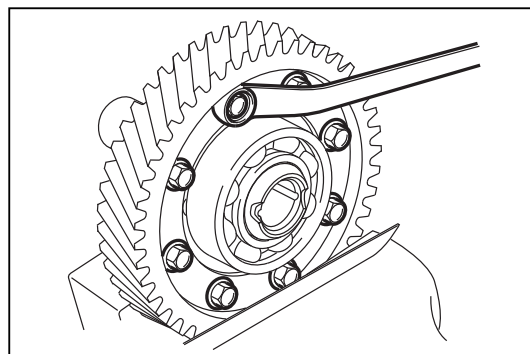
MAT00164-00161

9. Install the side with a smaller chamfer (A) of the differential ring gear bore section to the differential case side (B).



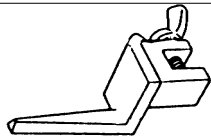
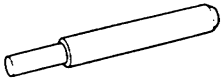
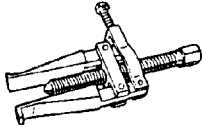
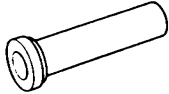
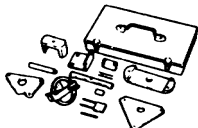
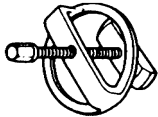
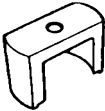
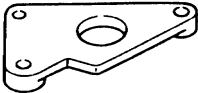
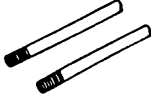
MAT00165-00162

10. Clamp the differential case in a vice, with soft jaws and tighten the differential ring gear with the 8 bolts.
Tightening Torque: 93.1 - 104.9 N·m

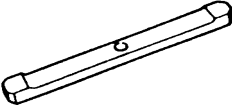
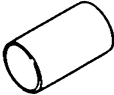
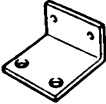
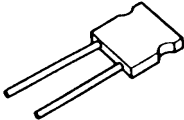
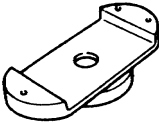
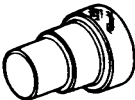
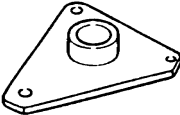
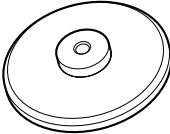
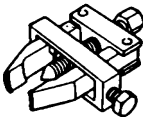
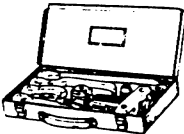


MAT00166-00163

SST (Special Service Tools)

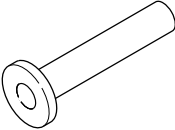
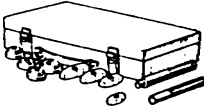
Shape	Part No.	Part name
	09302-87201-000	Gauge, neutral start switch adjust
	09301-87702-000	Tool, clutch guide
	09308-10010-000	Puller, oil seal
	09310-87301-000	Replacer, counter shaft front bearing
	09350-87202-000	Tool set, automatic transmission
      	09351-87201-000	Compressor, piston spring No. 1
	09351-87202-000	Compressor, piston spring No. 2
	09351-87203-000	Attachment, dial gauge
	09351-87204-000	Compressor, spring
	09351-87205-000	Holder, reduction drive gear holding
	09351-87206-000	Driver, oil pump
	09351-87207-000	Guide, oil pump

*It should be noted that 09350-87202 contains SSTs other than those posted in this section.

Shape	Part No.	Part name
	09351-87208-000	Measure, direct & forward clutch
	09351-87209-000	Stopper, drive gear
	09351-87210-000	Base, dial gauge stand
	09351-87211-000	Tool, manual value setting
	09351-87212-000	Holder, direct clutch
	09351-87213-000	Gauge, centering side gear
	09351-87214-000	Holder, ball bearing
	09611-87506-000	Handle
	09351-97201-000	Replacer, hole snap ring
	09518-87709-000	Replacer, oil seal No. 8
	09636-20010-000	Replacer, upper ball joint dust cover
	09820-00021-000	Puller, alternator rear bearing
	09950-20017-000	Puller, universal

*It should be noted that 09350-87202 contains SSTs other than those posted in this section.

AT-46

Shape	Part No.	Part name
	09950-87701-000	Bearing remover
	09309-87301-000	Replacer, output shaft bearing
	09517-87203-000	Replacer, oil seal No. 1
	09517-87205-000	Replacer, oil seal No. 2
	09215-00101-000	Remover & replacer, camshaft bearing
	09608-30012-000	Tool set, front hub & drive pinion bearing

TIGHTENING TORQUE

Tightening components	Tightening torque	
	N·m	kgf·m
Rear transmission case cover × Transmission case (M6)	14.7 - 21.6	1.5 - 2.2
Engine mounting lower left bracket × Transmission case (M8)	14.7 - 21.6	1.5 - 2.2
Starter shaft & oil pump × Transmission case	6.9 - 9.8	0.7 - 1.0
Valve body × Transmission case	6.9 - 9.8	0.7 - 1.0
Manual detent spring × Transmission case	6.9 - 9.8	0.7 - 1.0
Transaxle oil pan × Transmission case	6.9 - 9.8	0.7 - 1.0
Neutral start switch × Transmission case	14.7 - 21.6	1.5 - 2.2
Neutral switch lever assembly × Transmission case	9.8 - 15.7	1.0 - 1.6
Breather union × Transmission case	2.9 - 9.8	0.3 - 1.0
Neutral start switch coupler	14.7 - 21.6	1.5 - 2.2
Control cable bracket × Transmission case	14.7 - 21.6	1.5 - 2.2
Transmission revolution sensor × Transmission case	6.9 - 9.8	0.7 - 1.0
Transmission oil filler tube × Transmission case	14.7 - 21.6	0.7 - 1.0
Lock nut × Primary reduction drive gear	79.0 - 118.0	8.1 - 12.0
Torque connector & differential case × Differential case	14.7 - 21.6	1.5 - 2.2
Differential ring gear × Differential case	93.1 - 104.9	9.5 - 10.7
Union for oil cooler × Transaxle case	29.4 - 39.2	3.0 - 4.0
Compression spring × Transmission case	6.9 - 9.8	0.7 - 1.0
Oil cooler tube cramp × Transmission case	6.9 - 9.8	0.7 - 1.0

MAT00168-00165