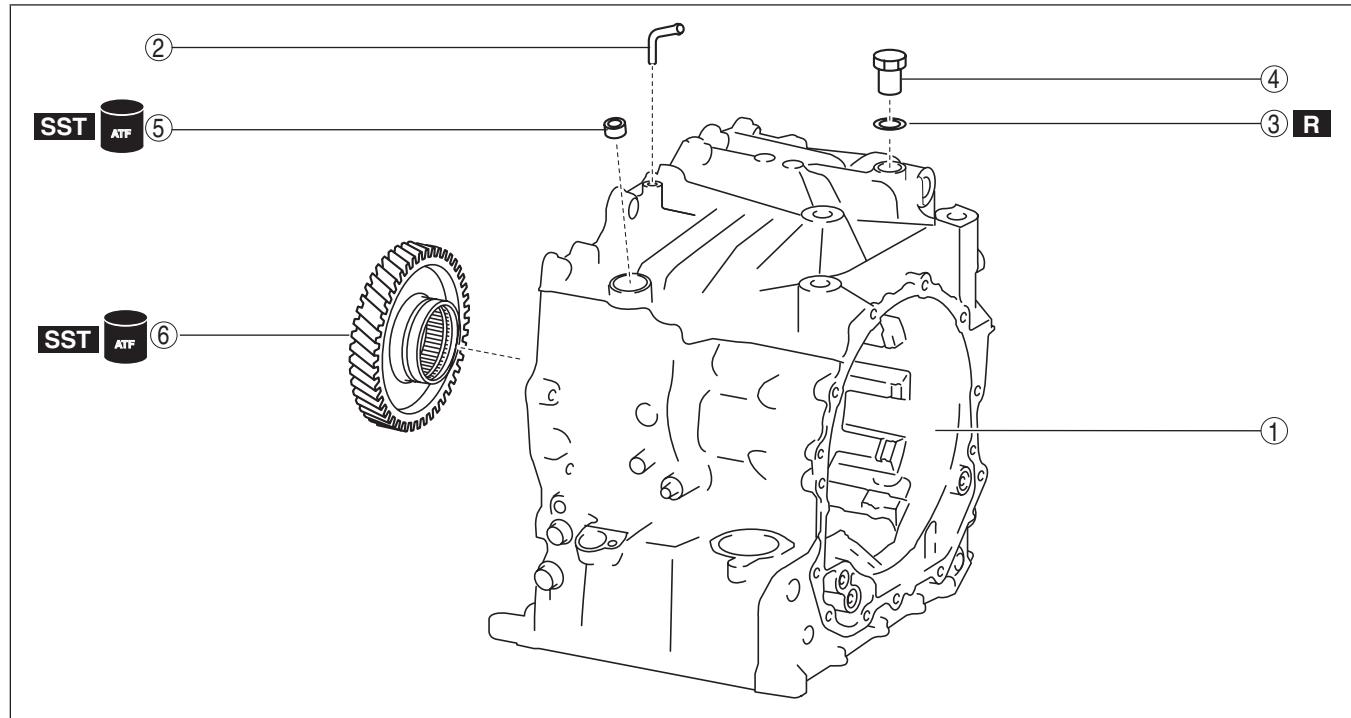


AUTOMATIC TRANSAXLE ASSEMBLY

id051700664400

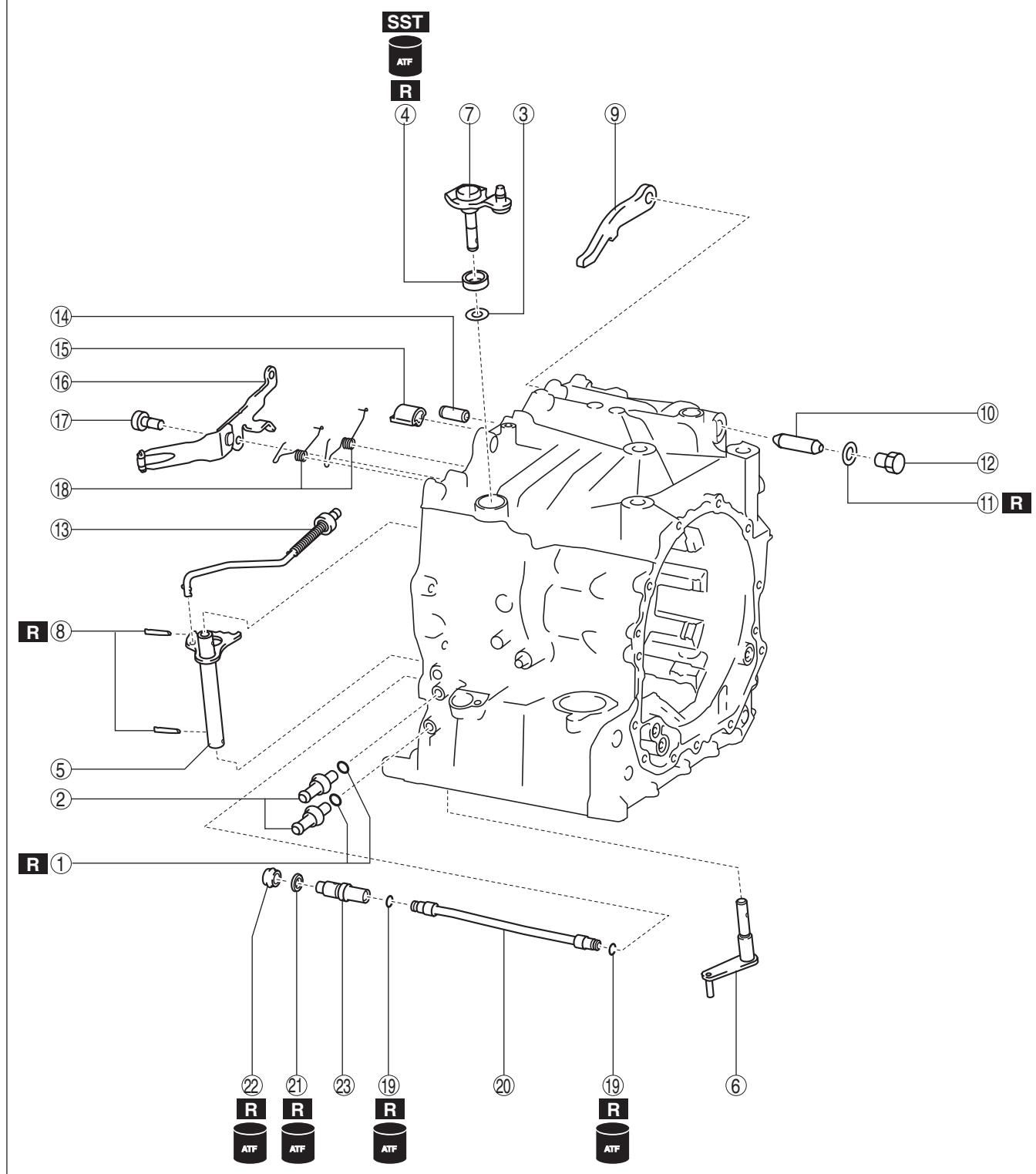
Structural View Automatic transaxle 1



bgw2za00000004

1	Transaxle case
2	Breather pipe
3	Gasket
4	Plug (M18×1.5 bolt, length approx. 21.5 mm {0.846 in})
5	Radial needle bearing
6	Primary gear

Automatic transaxle 2



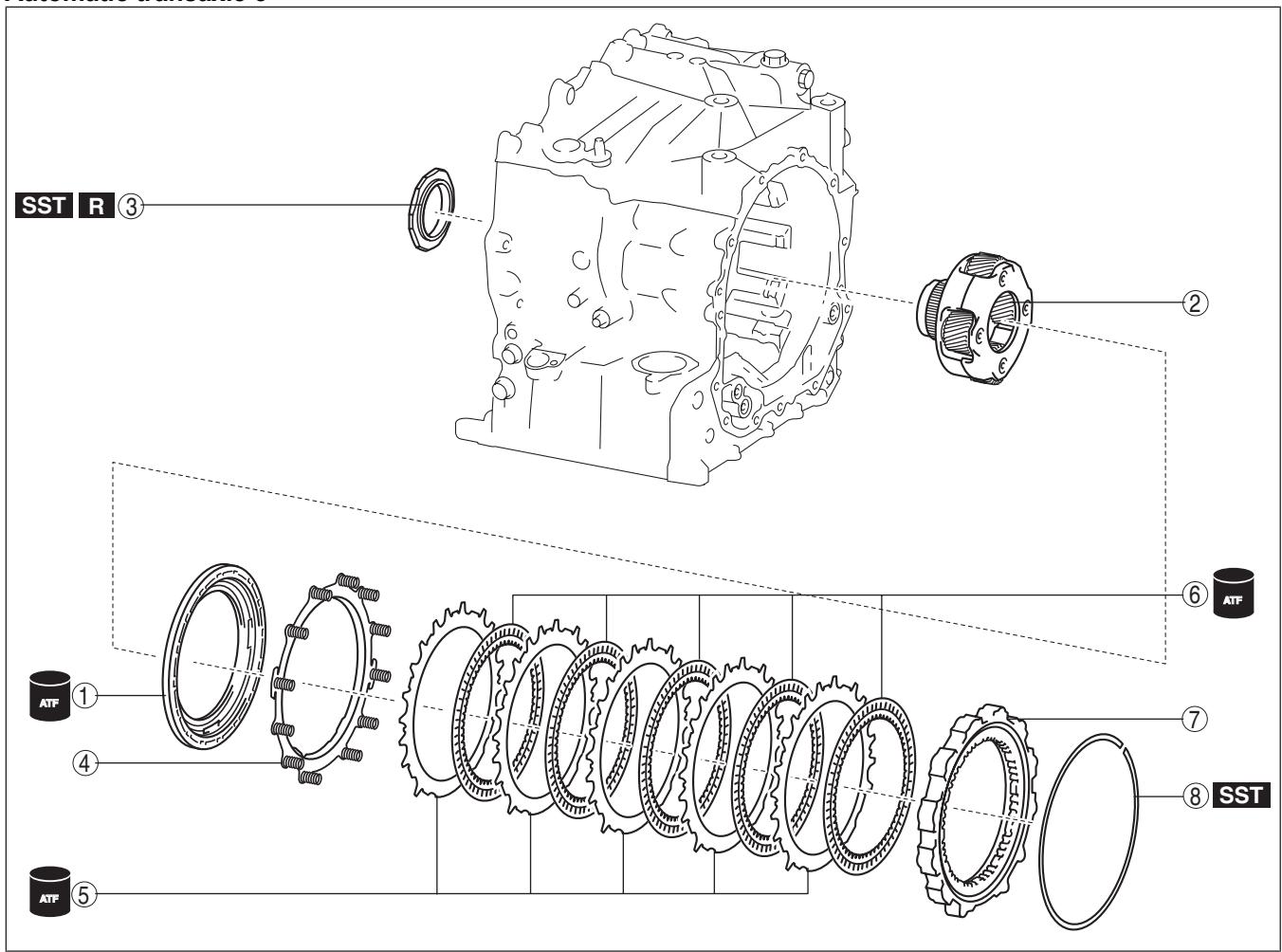
bgw3ja00000294

1	Gasket *
2	Connector bolt *
3	Washer
4	Oil seal
5	Manual plate component
6	Parking assist lever component
7	Parking shift lever component
8	Roll pin
9	Parking pawl

10	Parking pawl shaft
11	Gasket
12	Plug (M14×1.5 bolt, length approx. 10 mm {0.39 in})
13	Parking rod component
14	Parking pawl pin
15	Support actuator
16	Detent bracket component
17	2 bolts (M8×1.25 bolt, length approx. 16 mm {0.63 in})
18	Pawl return spring
19	O-ring (outer diameter approx. 11.6 mm {0.457 in}, thickness approx. 1.9 mm {0.075 in})
20	Oil pipe
21	Gasket
22	Gasket
23	Connector

* : Only vehicles with oil cooler No.2

Automatic transaxle 3

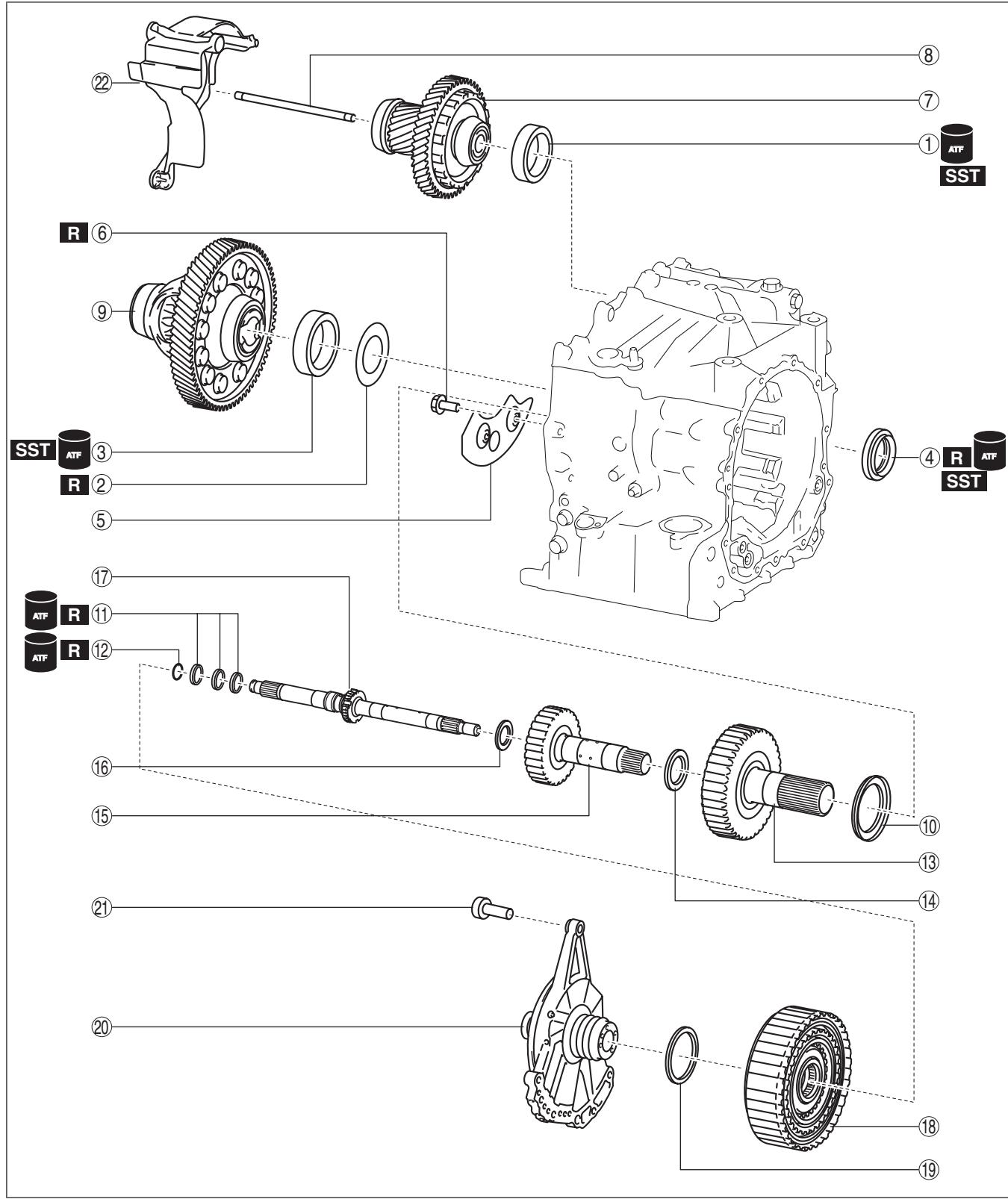


bgw3ja00000646

1	Low and reverse brake piston
2	Front planetary gear
3	Locknut
4	Springs and retainer component (inner diameter approx. 155.3 mm {6.114 in})
5	Driven plate (inner diameter approx. 149.6 mm {5.890 in})
6	Drive plate (outer diameter approx. 174.1 mm {6.854 in})

7	One-way clutch
8	Snap ring (outer diameter approx. 198.0 mm {7.795 in}) (selection)

Automatic transaxle 4



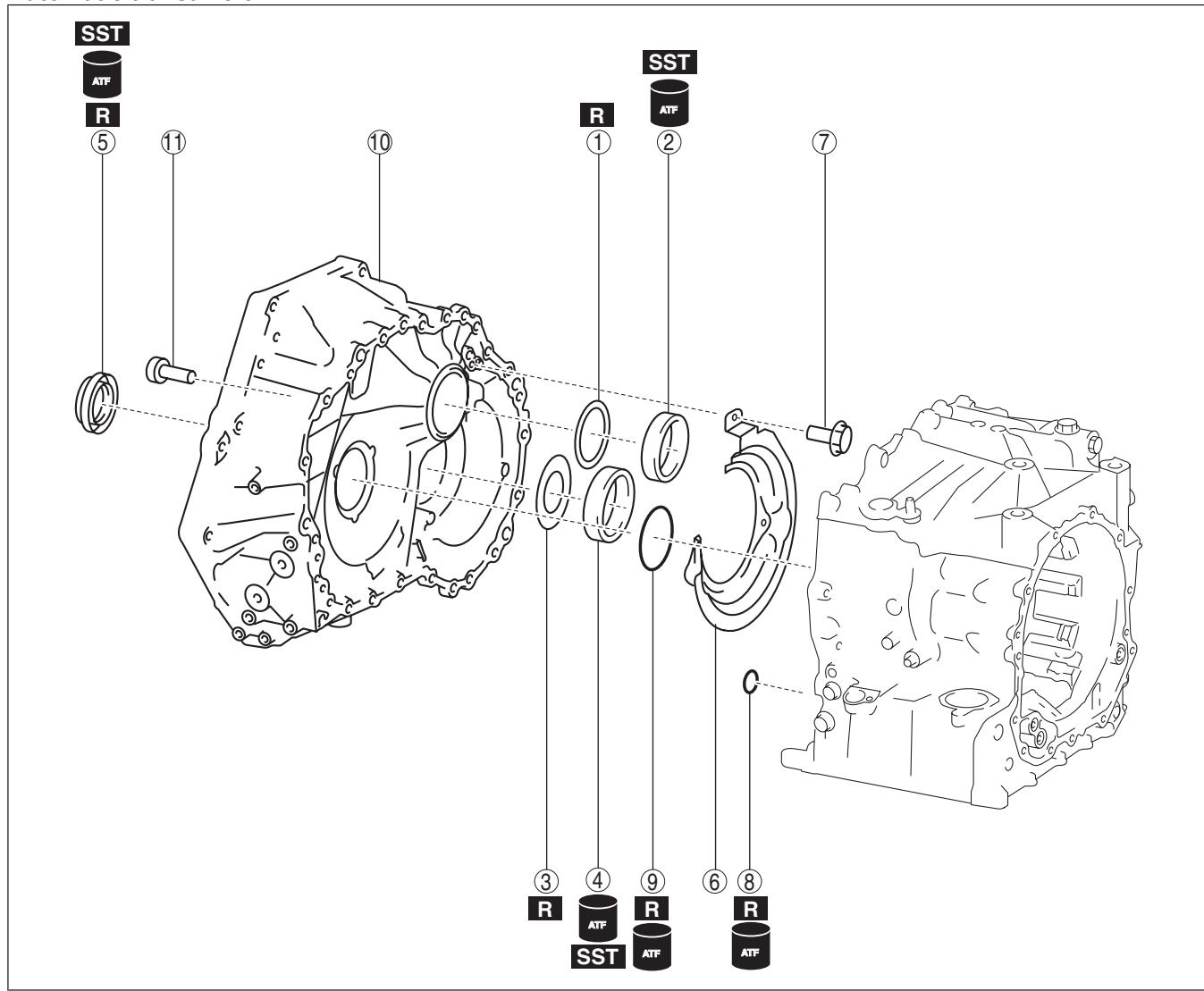
bgw3ja00000296

1	Bearing race (outer diameter approx. 72 mm {2.8 in})
2	Shim (outer diameter approx. 89 mm {3.5 in}, thickness approx. 0.5 mm {0.02 in})

3	Bearing race (outer diameter approx. 90 mm {3.5 in}, width approx. 17.25 mm {0.6791 in})
4	Oil seal (outer diameter approx. 63 mm {2.5 in})
5	Baffle plate
6	2 bolts (M6×1.0 bolt, length approx. 15 mm {0.59 in} *)
7	Secondary gear and output gear
8	Oil pipe
9	Ring gear and differential
10	Thrust needle bearing (outer diameter approx. 80.3 mm {3.16 in})
11	Seal ring (outer diameter approx. 27.9 mm {1.10 in}, thickness approx. 1.5 mm {0.059 in})
12	D-ring (outer diameter approx. 16.4 mm {0.646 in}, thickness approx. 2.4 mm {0.094 in})
13	Low clutch hub
14	Thrust needle bearing (outer diameter approx. 51.3 mm {2.02 in})
15	High clutch hub
16	Thrust needle bearing (outer diameter approx. 37.3 mm {1.47 in})
17	Turbine shaft
18	Clutch component
19	Thrust needle bearing (outer diameter approx. 76.7 mm {3.02 in})
20	Oil pump
21	7 bolts (M8×1.25 bolt, length approx. 31 mm {1.2 in})
22	Baffle plate

* : Length without spring washer is indicated due to bolt with spring washer. Length with spring washer is approx. 13 mm {0.51 in}. In addition, this bolt is coated with thread-locking compound.

Automatic transaxle 5

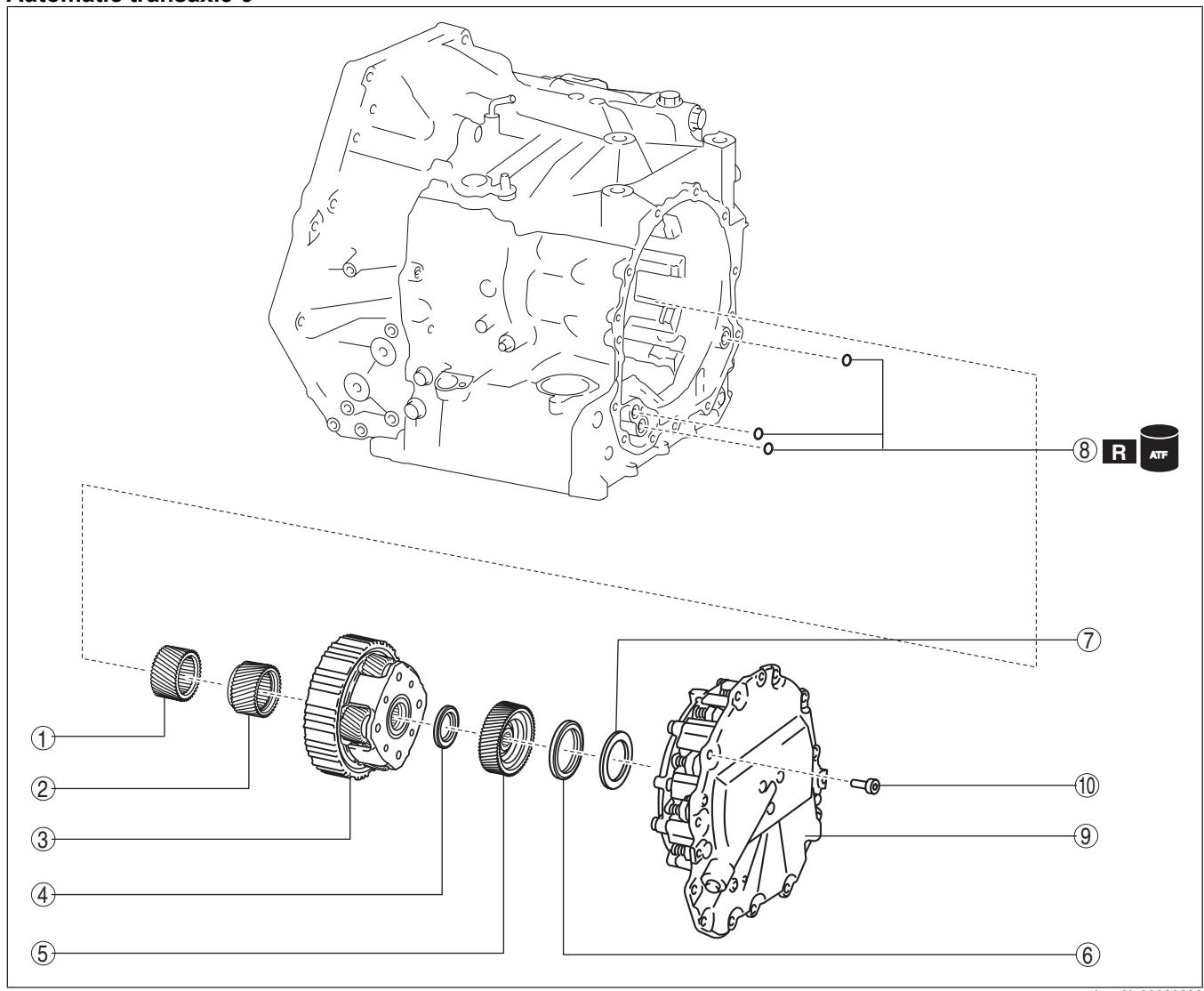


bgw3ja00000297

1	Shim (outer diameter approx. 81 mm {3.2 in}) (selection)
2	Bearing race (outer diameter approx. 82 mm {3.2 in})
3	Shim (outer diameter approx. 89 mm {3.5 in}) (selection)
4	Bearing race (outer diameter approx. 90 mm {3.5 in}), width approx. 21 mm {0.83 in})
5	Oil seal (GW6A-EL: outer diameter approx. 65 mm {2.6 in}, GW6AX-EL: outer diameter approx. 67 mm {2.6 in})
6	Baffle plate
7	3 bolts (M6×1.0 bolt, length approx. 14 mm {0.55 in})
8	O-ring (outer diameter approx. 15.6 mm {0.614 in}), thickness approx. 2.4 mm {0.094 in})
9	O-ring (outer diameter approx. 73.3 mm {2.89 in}), thickness approx. 3.0 mm {0.12 in})
10	Converter housing
11	25 bolts * (M8×1.25 bolt, length approx. 28 mm {1.1 in})

* : Of the 25 bolts, 5 are coated with sealant

Automatic transaxle 6

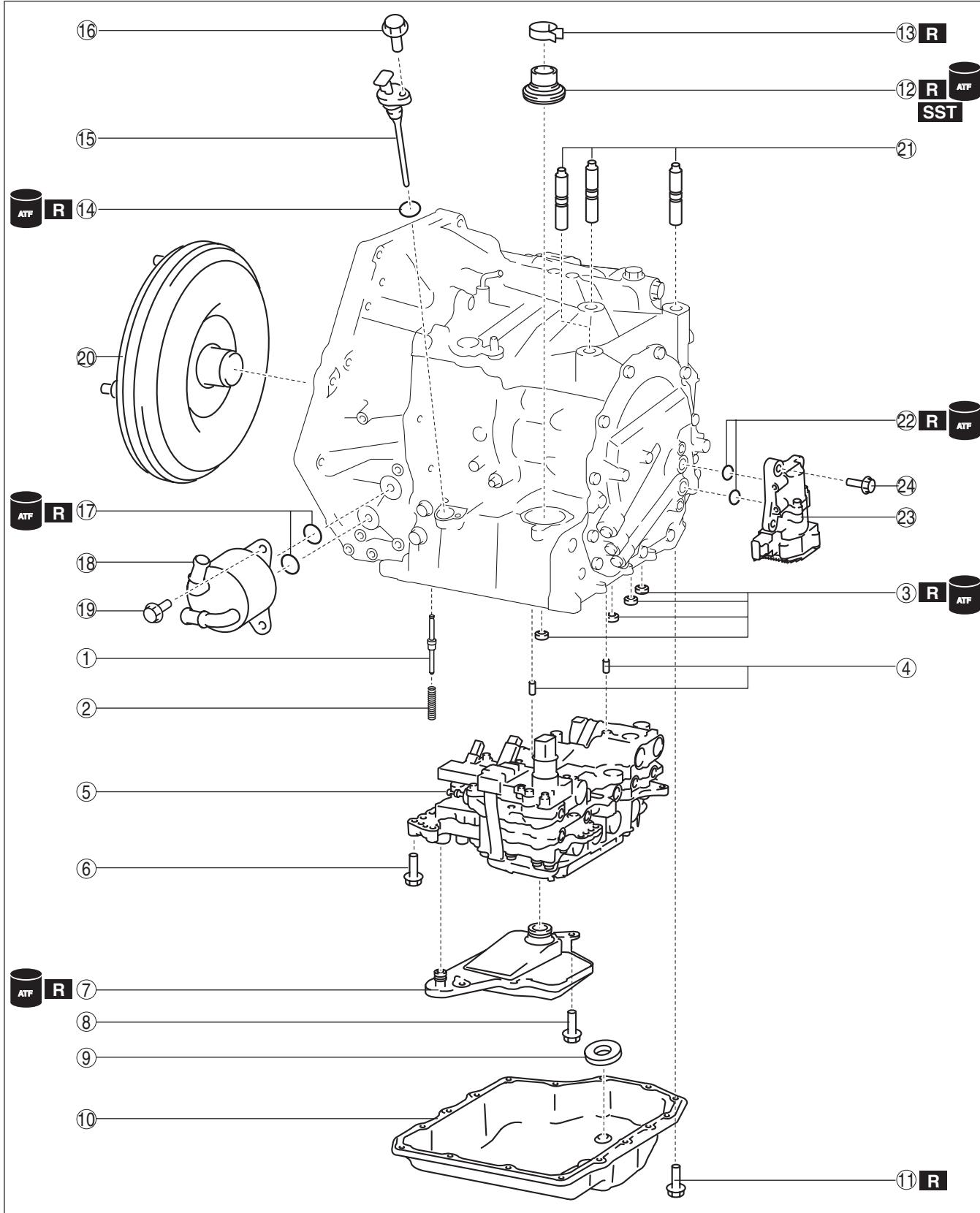


bgw3ja00000298

1	Front sun gear
2	Rear sun gear
3	Rear planetary gear
4	Thrust needle bearing (outer diameter approx. 44 mm {1.7 in})
5	Reduction sun gear
6	Thrust needle bearing (outer diameter approx. 61.5 mm {2.42 in})
7	Shim (outer diameter approx. 59.5 mm {2.34 in}) (selection)
8	O-ring (outer diameter approx. 15.6 mm {0.614 in}, thickness approx. 2.4 mm {0.094 in})
9	End cover component
10	12 bolts * (M8×1.25 bolt, length approx. 21 mm {0.83 in})

* : Of the 12 bolts, 2 are coated with sealant

Automatic transaxle 7



bgw3ja00000299

1	Spool valve ^{*1}
2	Spool valve spring ^{*1}
3	Gasket
4	Dowel pin
5	Control valve body

6	11 bolts (M6×1.0 bolt, length approx. 30 mm {1.2 in})
7	Oil strainer
8	2 bolts (M6×1.0 bolt, length approx. 16 mm {0.63 in})
9	Magnet
10	Oil pan
11	16 bolts (M6×1.0 bolt, length approx. 15 mm {0.59 in} *2)
12	Oil seal
13	Hose clamp
14	O-ring (outer diameter approx. 16.6 mm {0.654 in}, thickness approx. 2.4 mm {0.094 in})
15	Dipstick
16	Bolt (M6×1.0 bolt, length approx. 16 mm {0.63 in})
17	O-ring (outer diameter approx. 24.4 mm {0.961 in}, thickness approx. 2.4 mm {0.094 in})
18	Oil cooler
19	3 bolts (M8×1.25 bolt, length approx. 23.5 mm {0.925 in})
20	Torque converter
21	Stud bolt
22	O-ring (outer diameter approx. 15.6 mm {0.614 in}, thickness approx. 2.4 mm {0.094 in}) ^{*3}
23	Electric AT oil pump *3
24	3 bolts *3 (M8×1.25 bolt, length approx. 25 mm {0.98 in})

*1 : Only vehicles with oil cooler No.2

*2 : Length without spring washer is indicated due to bolt with spring washer. Length with spring washer is approx. 13 mm {0.51 in}.

*3 : Only vehicles with i-stop

Assembly Procedure

- Assemble the parts in the following order.

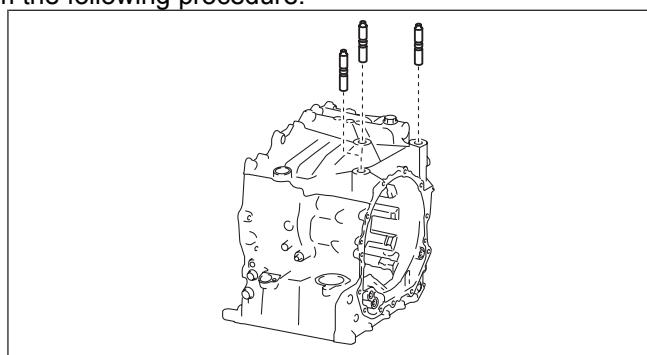
Note

- Assemble the parts in the following order because the parts in the transaxle may be used for measurement/adjustment.

- (1) Oil pump (See OIL PUMP ASSEMBLY)
 (2) Clutch component (See CLUTCH COMPONENT ASSEMBLY)
 (3) Rear planetary gear (See REAR PLANETARY GEAR ASSEMBLY)
 (4) Reduction planetary gear (See REDUCTION PLANETARY GEAR ASSEMBLY)
 (5) Secondary gear and output gear (See SECONDARY GEAR AND OUTPUT GEAR ASSEMBLY)
 (6) Ring gear and differential (See RING GEAR AND DIFFERENTIAL ASSEMBLY)
 (7) End cover component (See END COVER COMPONENT ASSEMBLY)
 (8) Control valve body (See CONTROL VALVE BODY ASSEMBLY)

- If the transaxle case is replaced with a new one, perform the following procedure:

- Remove the stud bolts.



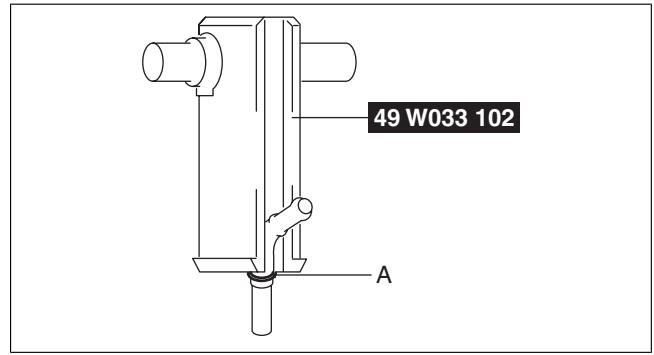
azzjjw00000534

- Assemble a new breather pipe using the following procedure:
 1) Insert a new breather pipe using the SST as shown in the figure.

Note

- Insert the breather pipe using the SST so that the breather pipe brim can be pressed by the end of the SST.

A : Brim

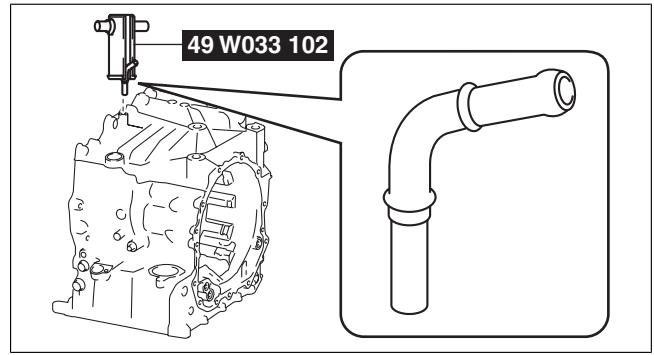


bgw3ja00000647

2) Assemble a new breather pipe to the position shown in the figure.

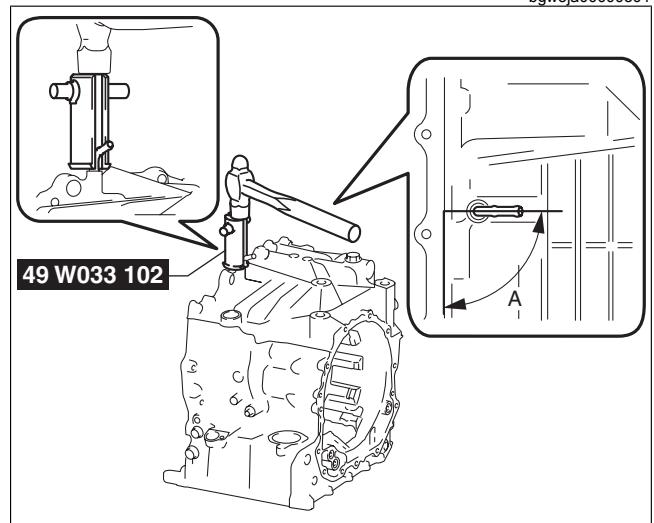
Note

- Lightly tap and press the breather pipe brim until it contacts the transaxle case so as not damage the breather pipe.



bgw3ja00000301

A : 85—95° (Assemble so that connection side of breather hose for breather pipe is facing end cover side)



bgw3ja00000459

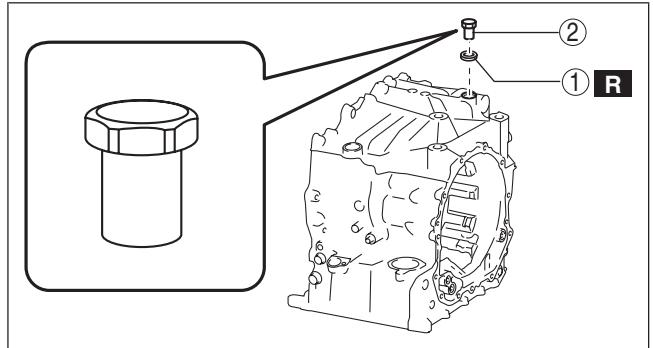
(3) Assemble the plug and new gasket in the order shown in the figure.

Caution

- If a gasket is reused it could cause ATF leakage, therefore use a new gasket.

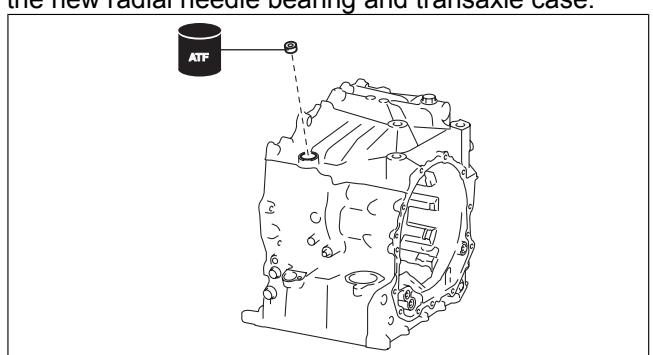
Plug tightening torque
39—59 N·m {4.0—6.0 kgf·m, 29—43 ft·lbf}

1	Gasket
2	Plug (M18×1.5 bolt, length approx. 21.5 mm {0.846 in})



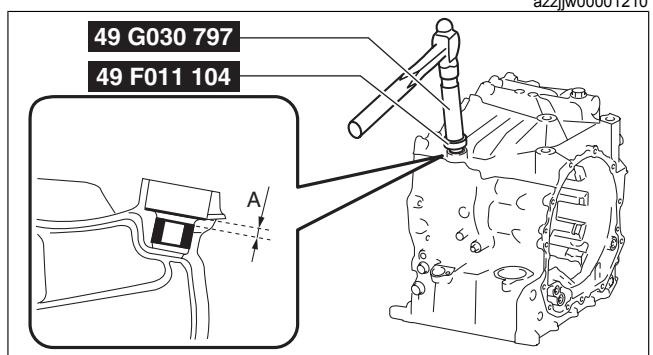
azzjw00000537

- (4) Assemble a new radial needle bearing using the following procedure:
- 1) Apply ATF (ATF FZ) to the engagement area of the new radial needle bearing and transaxle case.
 - 2) Assemble the new radial needle bearing to the position shown in the figure using the SSTs.



azzjw00001210

A : 1.9—2.9 mm {0.08—0.11 in}



azzjw00001253

3. Install the transaxle case to the SST (engine stand) using the following procedure:

- (1) Install the SSTs to the transaxle case using the following procedure.

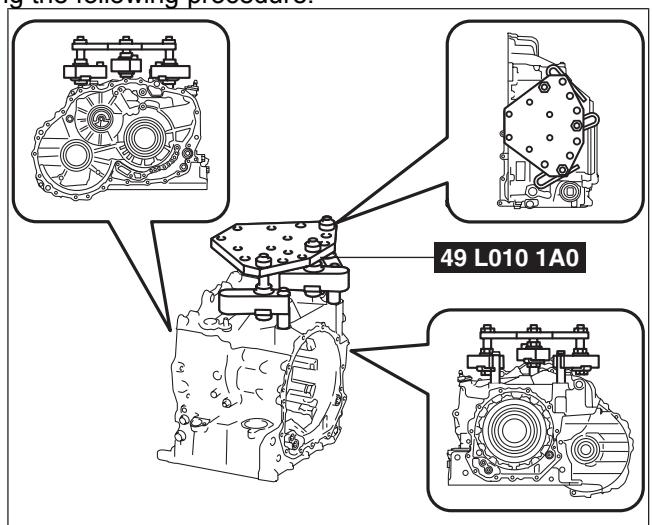
Note

- When installing the SST (49 L010 1A0) to the transaxle case (stud bolt holes), use part number: 9YA02 1440, or M14×1.5 bolts, length 100 mm {3.94 in}.

- 1) Temporarily install the arms (49 L010 102) using part number: 9YA02 1440, or M14×1.5 bolts, length 100 mm {3.94 in}.

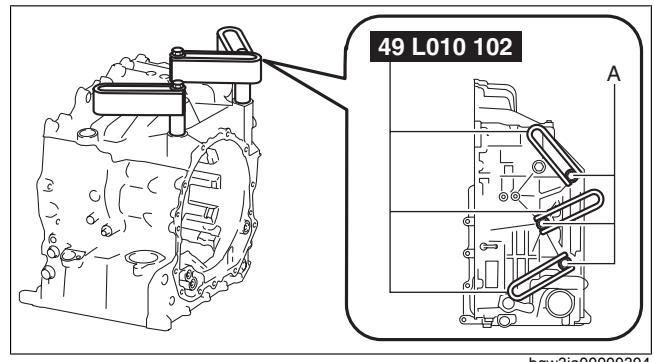
Note

- To adjust the installation position of the SST in Step 3), temporarily tighten the bolts.



bgw3ja00000303

A : Part number: 9YA02 1440, or M14×1.5 bolt, length 100 mm {3.94 in}



bgw3ja00000304

2) Assemble the SST (49 L010 1A0).

Note

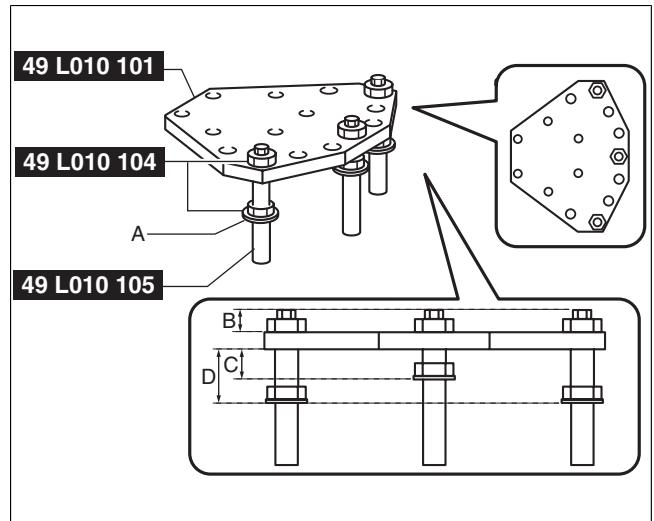
- Use bolts (49 L010 105) with a length of 138 mm {5.43 in}.

A : Washer

B : Approx. 20 mm {0.79 in}

C : Approx. 26 mm {1.0 in}

D : Approx. 47 mm {1.9 in}



bgw3ja00000305

3) Install the SST assembled in Step 2).

Note

- Adjust so that the plate (49 L010 101) and arms (49 L010 102) are level, and install.

A : Washer

B : Level out

- 4) Verify that nothing other than the SST arms (49 L010 102) installation area contacts the transaxle case and breather pipe.

Caution

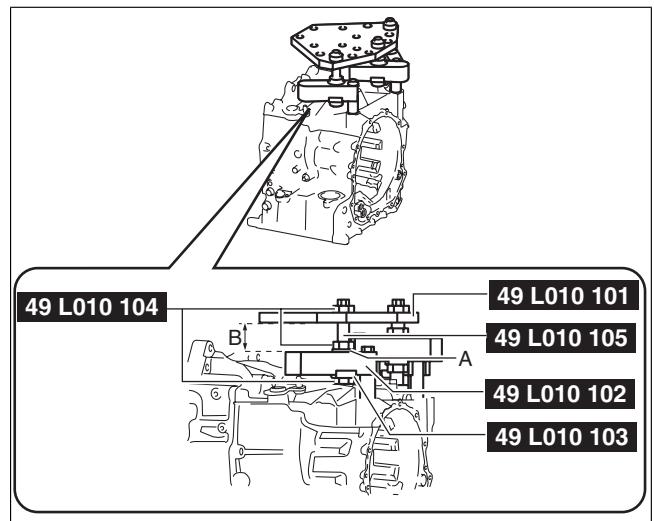
- If something other than the SST arms (49 L010 102) installation area contacts the transaxle case and breather pipe, readjust the SST to prevent damaging the part.

- 5) Tighten the nuts and bolts.

Tightening torque

- Bolt: Part number: 9YA02 1440, or M14×1.5 bolt, length 100 mm {3.94 in}
40—52 N·m {4.1—5.3 kgf·m, 30—38 ft·lbf}
- Nut: 49 L010 104
140—160 N·m {15—16 kgf·m, 104—118 ft·lbf}

- (2) Install the transaxle case to the SST (engine stand) using part number: 9YA02 A220, or M12×1.75 bolt, length 40 mm {1.6 in}.



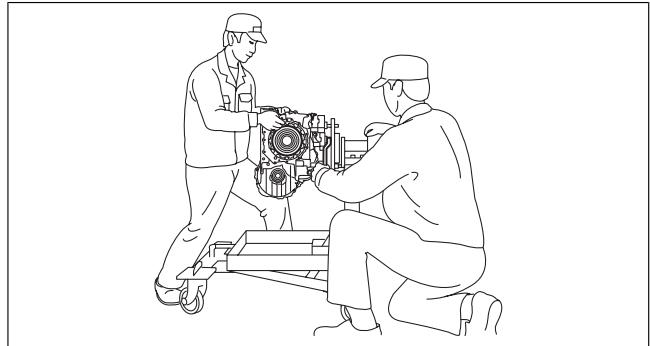
bgw3ja00000306

Caution

- For safety purposes, perform the procedure using two people, one installs the transaxle case to the SST and the other supports the transaxle case.

Note

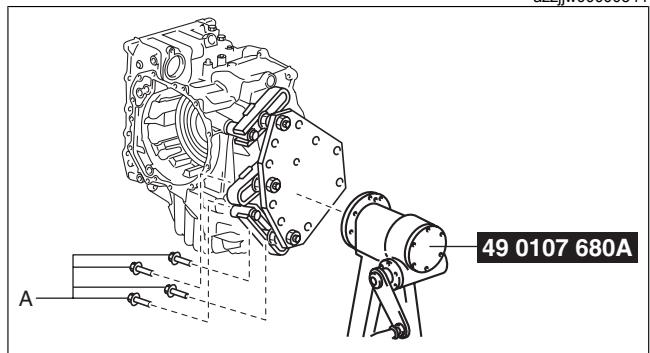
- Tighten the four locations with bolts and securely install the transaxle case to the SST (engine stand).



azzjjw00000544

A : Part number: 9YA02 A220, or M12×1.75 bolt, length 40 mm {1.6 in}

Tightening torque
88—118 N·m {9.0—12 kgf·m, 65—87 ft·lbf}

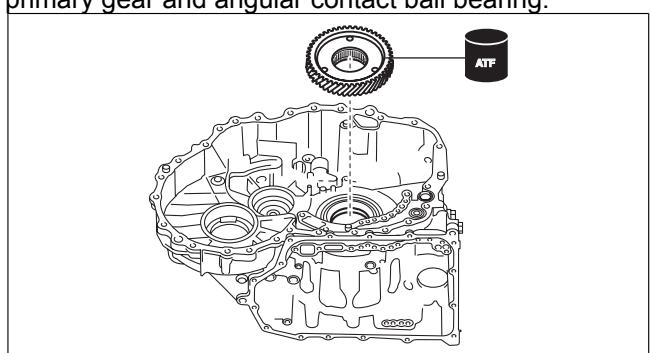


bgw3ja00000307

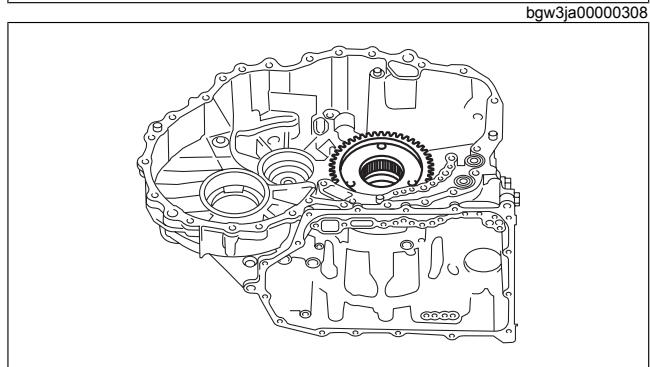
4. Assemble the primary gear using the following procedure:**Note**

- Perform this procedure only if the transaxle case is replaced with a new one.

- (1) Apply ATF (ATF FZ) to the engagement area of the primary gear and angular contact ball bearing.
- (2) Assemble the primary gear on the angular contact ball bearing.

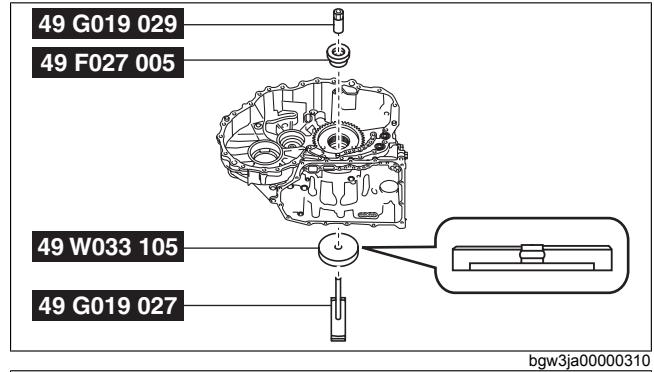


bgw3ja00000308

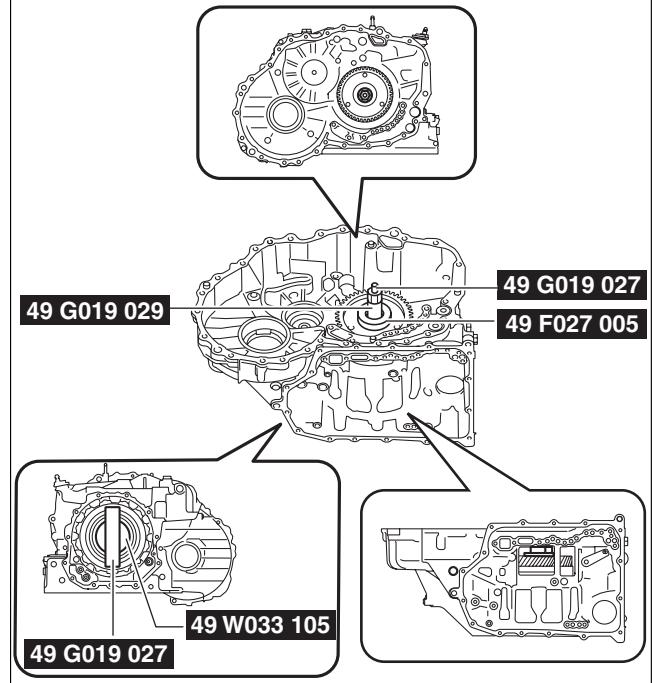


bgw3ja00000309

(3) Install the SSTs.

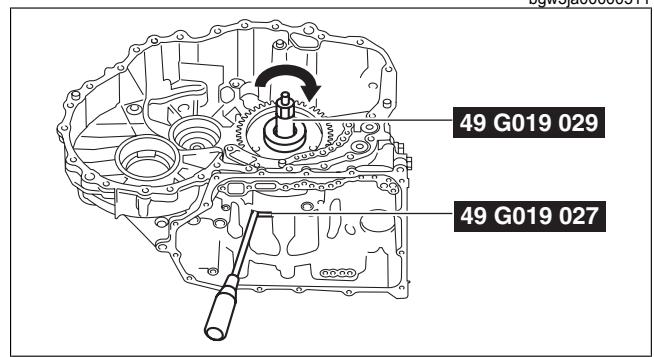


bgw3ja00000310



bgw3ja00000311

(4) Lock the SST (49 G019 027) against rotation using a flathead screwdriver, tighten the SST (49 G019 029), and assemble the primary gear.

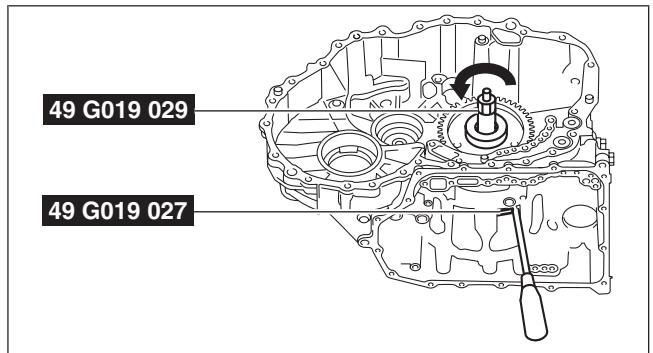


bgw3ja00000312

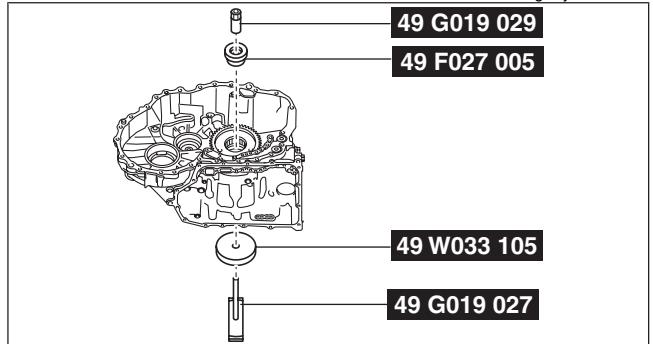
(5) Loosen the SST (49 G019 029) and remove the SSTs.

Note

- Lock the SST (49 G019 027) against rotation using a flathead screwdriver and loosen the SST (49 G019 029).



bgw3ja00000313



bgw3ja00000314

- Assemble the connector bolts and new gaskets in the order shown in the figure (only vehicles with oil cooler No. 2).

Caution

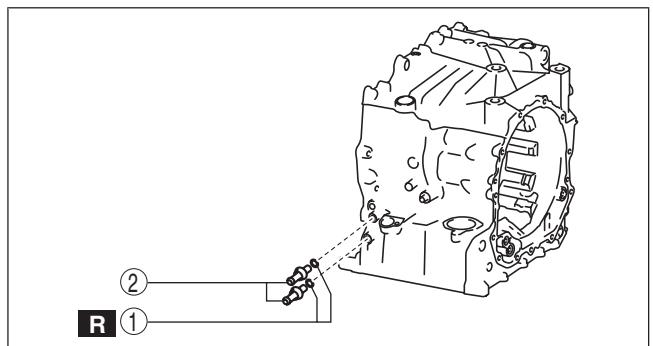
- If a gasket is reused it could cause ATF leakage, therefore use a new gasket.

Note

- Perform this procedure only if the connector bolts are removed.

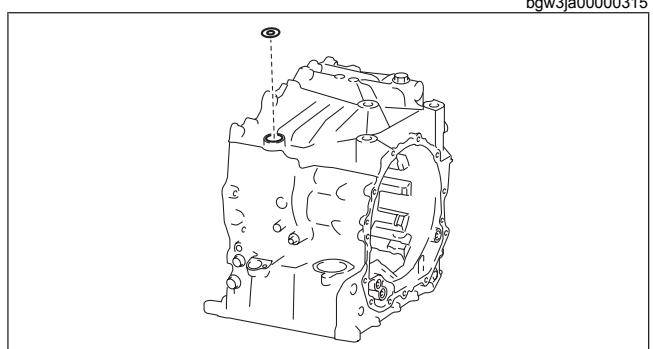
Connector bolt tightening torque
16—23 N·m {1.7—2.3 kgf·m, 12—16 ft·lbf}

1	Gasket
2	Connector bolt



bgw3ja00000315

- Assemble the washer.



azzjw00000553

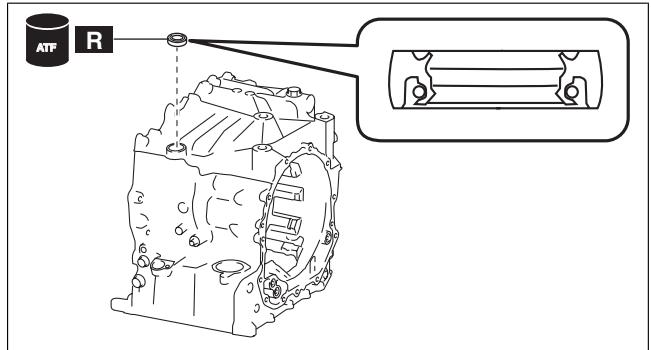
- Assemble a new oil seal using the following procedure:

Caution

- If an oil seal is reused it could cause ATF leakage, therefore use a new oil seal.

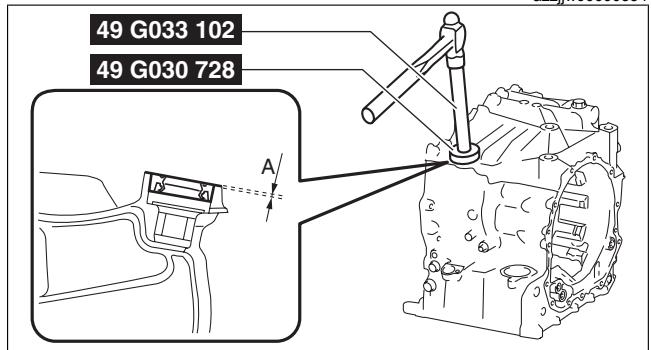
- Apply ATF (ATF FZ) to the engagement area of the new oil seal and transaxle case.

- (2) Apply ATF (ATF FZ) to the lip of the new oil seal.
 (3) Assemble the new oil seal to the position shown in the figure using the SSTs.



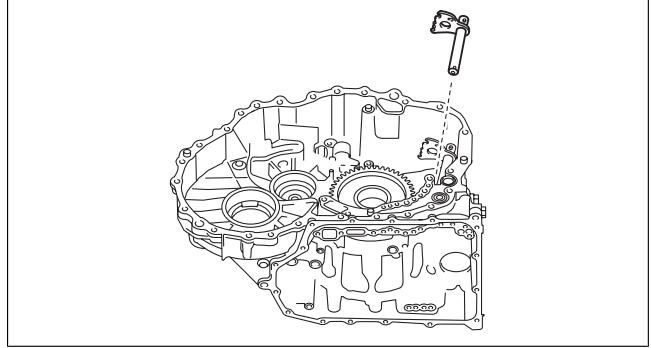
azzjjw00000554

A : -0.3—0.3 mm {-0.01—0.01 in}

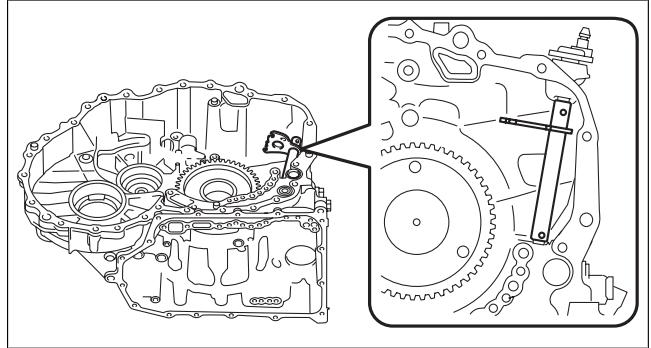


azzjjw00000555

8. Assemble the manual plate component.



bgw3ja00000316

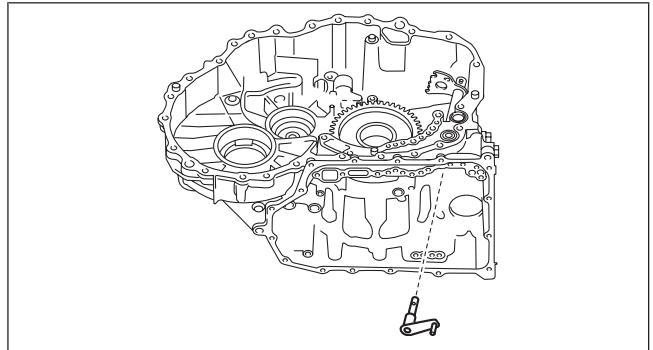


bgw3ja00000317

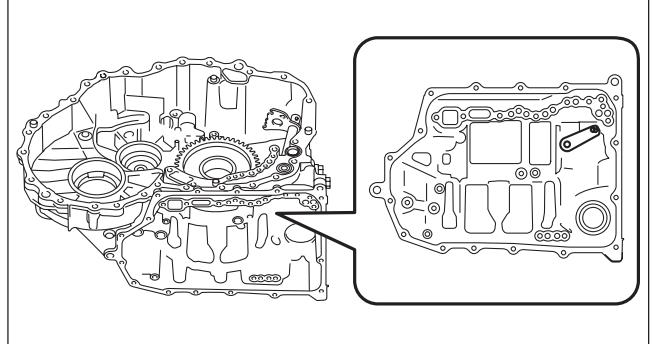
9. Assemble the parking assist lever component.

Note

- Pass the end of the parking assist lever component through the assembly hole of the transaxle case, and assemble it to the manual plate component.



bgw3ja00000318

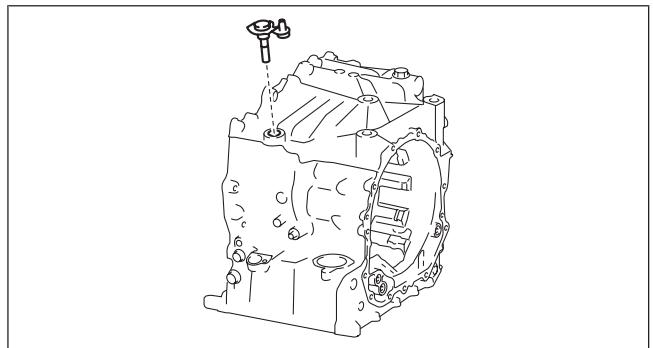


bgw3ja00000319

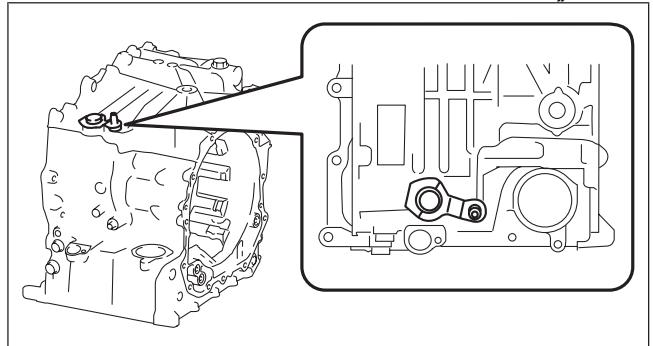
10. Assemble the parking shift lever component.

Note

- Pass the end of the parking shift lever component through the assembly hole (radial needle bearing) of the transaxle case, and assemble it to the manual plate component.



azjjw00000560



azjjw00000561

11. Assemble the new roll pins using the following procedure:

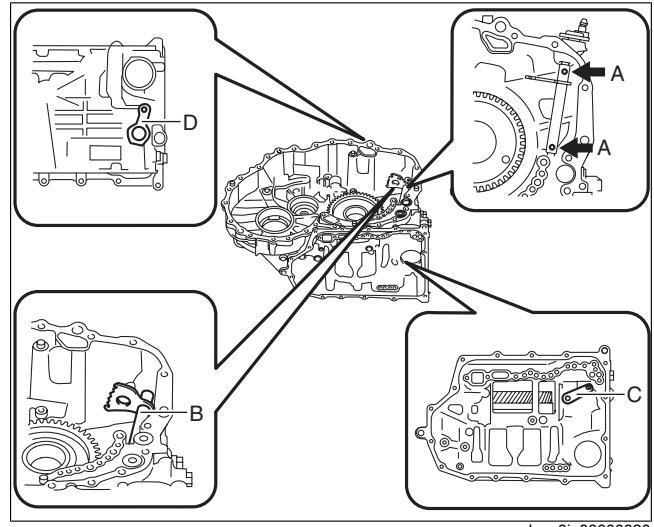
- (1) Set the manual plate component, parking assist lever component, and the parking shift lever component as shown in the figure and align with the roll pin hole.

A : Roll pin hole

B : Manual plate component

C : Parking assist lever component

D : Parking shift lever component

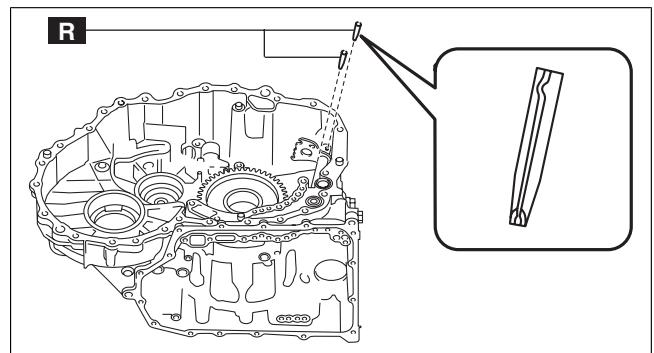


bgw3ja00000320

- (2) Assemble the new roll pins to the position shown in the figure using a pin punch.

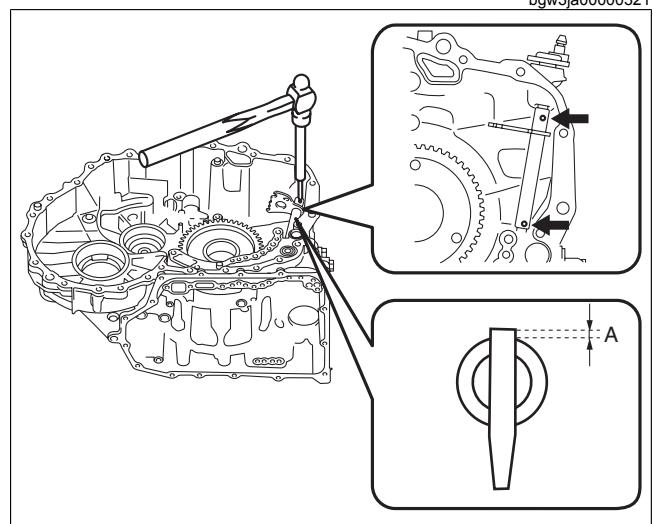
Note

- Use a pin punch with an end outer diameter of 5 mm {0.197 in} or more.



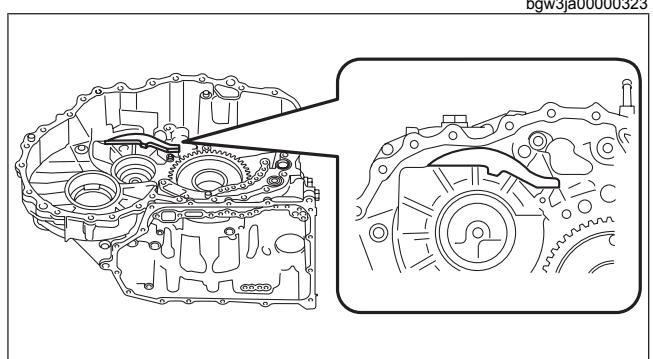
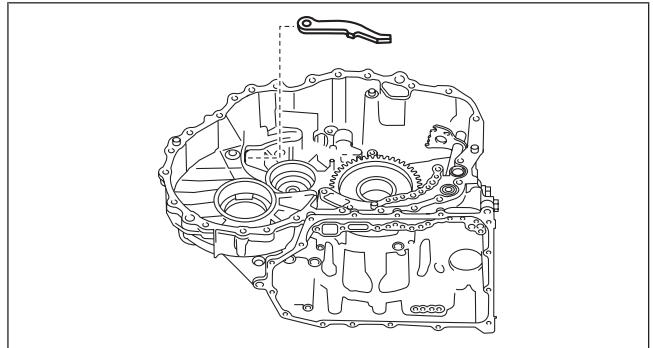
bgw3ja00000321

A : 0—1 mm {0—0.03 in}



bgw3ja00000322

12. Assemble the parking pawl.



13. Assemble the parking pawl shaft using the procedure shown in the figure.

Caution

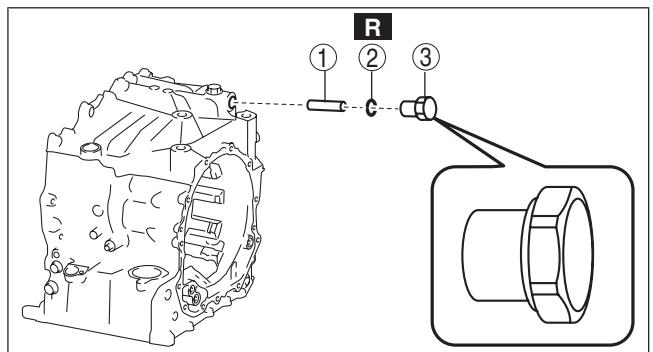
- If a gasket is reused it could cause ATF leakage, therefore use a new gasket.

Note

- Pass the parking pawl shaft through the assembly holes of the transaxle case and the parking pawl and assemble.

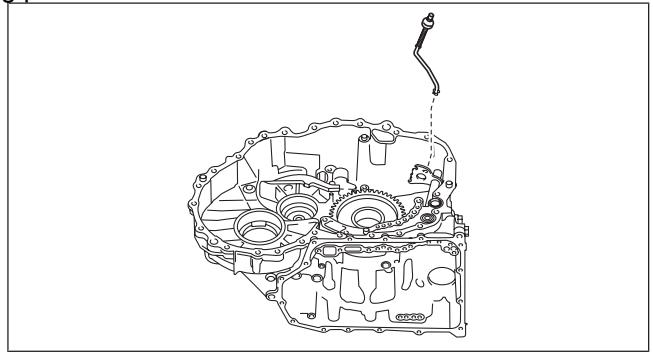
Plug tightening torque
20—29 N·m {2.1—2.9 kgf·m, 15—21 ft·lbf}

1	Parking pawl shaft
2	Gasket
3	Plug (M14×1.5 bolt, length approx. 10 mm {0.39 in})

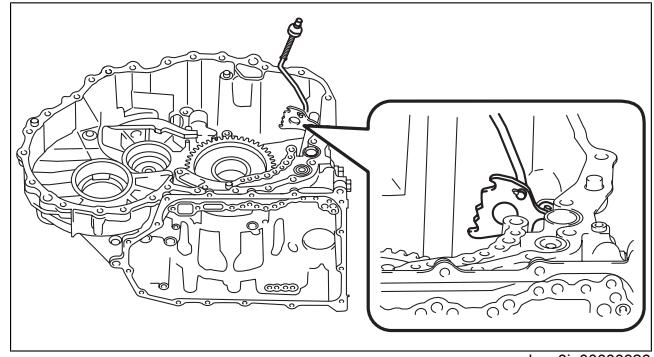


14. Assemble the parking rod component using the following procedure:

- (1) Align the parking rod component projection to the key hole of the manual plate component and assemble.

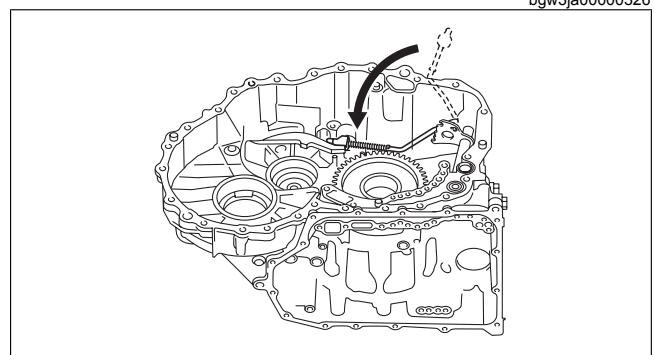


(2) Rotate the parking rod component as shown in the figure.



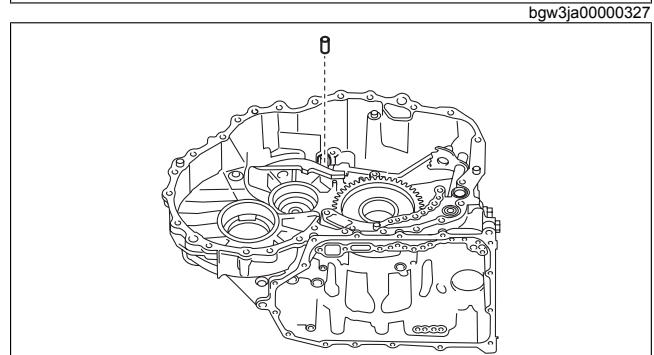
bgw3ja00000326

15. Assemble the parking pawl pin.

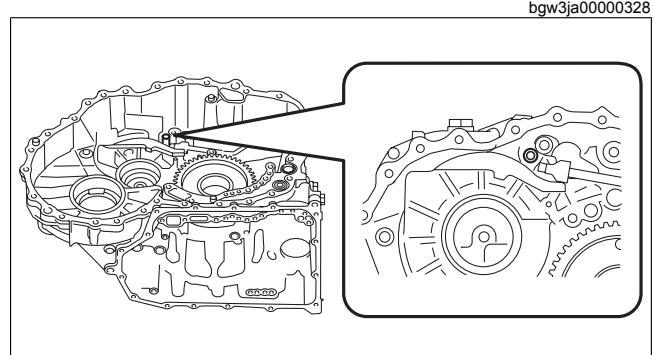


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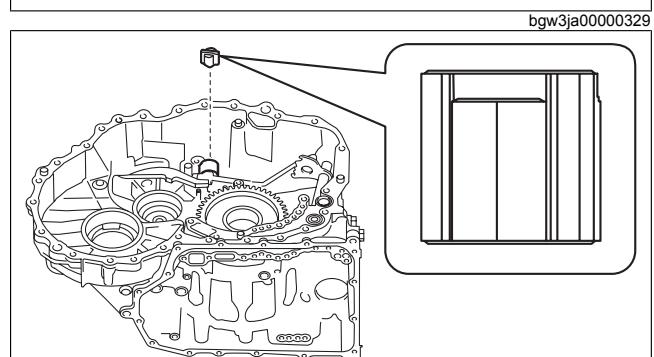
16. Assemble the support actuator.



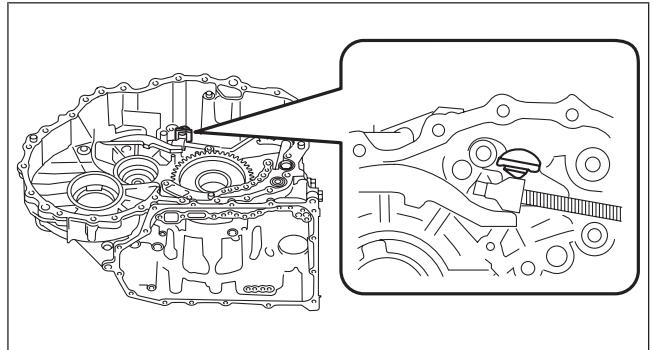
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bgw3ja00000329



bgw3ja00000330

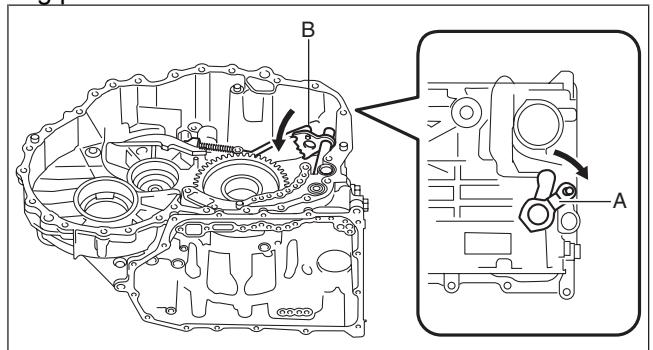


bgw3ja00000331

17. Assemble the detent bracket component using the following procedure:

- (1) Rotate the parking shift lever component (manual plate component) as shown in the figure.

A : Parking shift lever component
B : Manual plate component

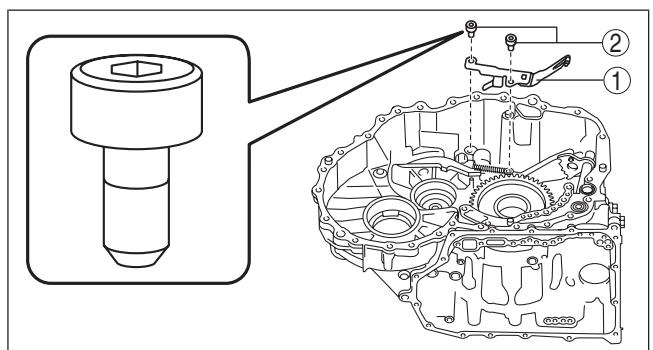


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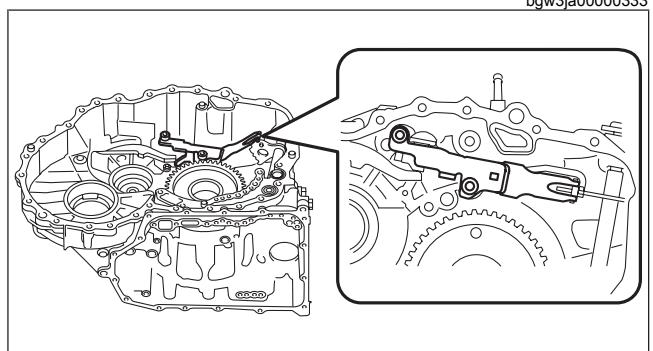
- (2) Assemble the detent bracket component using the procedure shown in the figure.

Caution

- When tightening bolts, verify that the detent bracket component does not interfere with the manual plate component to prevent damaging the part.



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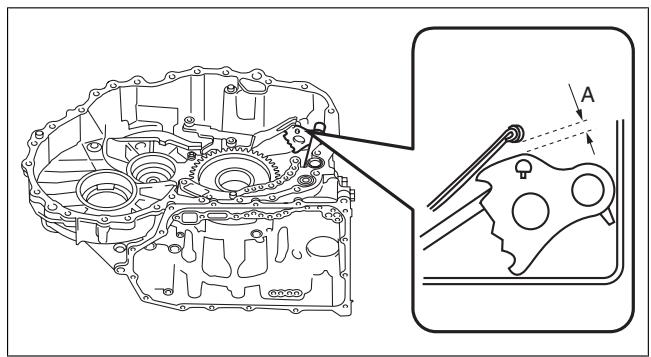


bgw3ja00000334

A : Gap

**Detent bracket component assembly bolt
tightening torque**
11—14 N·m {113—142 kgf·cm, 98—123 in·lbf}

1	Detent bracket component
2	Bolt (M8×1.25 bolt, length approx. 16 mm {0.63 in})



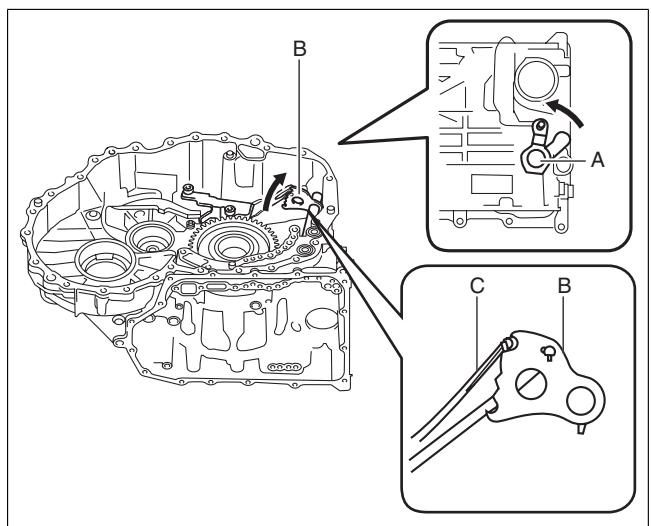
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- (3) Rotate the parking shift lever component (manual plate component) as shown in the figure, and align the detent bracket component with the groove of the manual plate component.

A : Parking shift lever component

B : Manual plate component

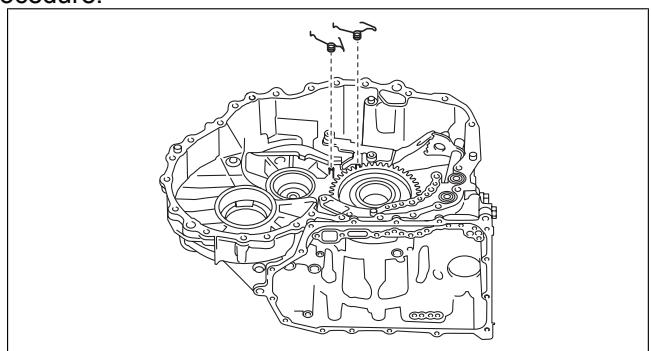
C : Detent bracket component



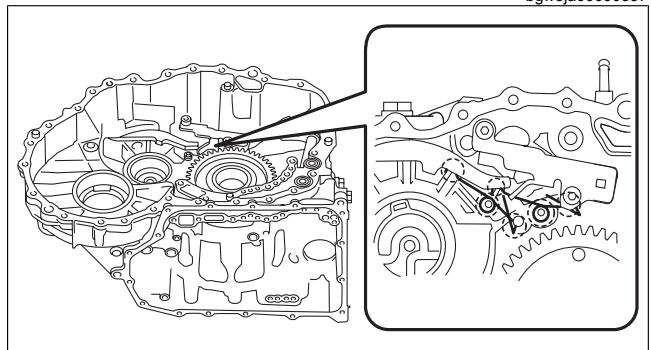
bgw3ja00000336

18. Assemble the pawl return springs using the following procedure:

- (1) Assemble the pawl return springs.



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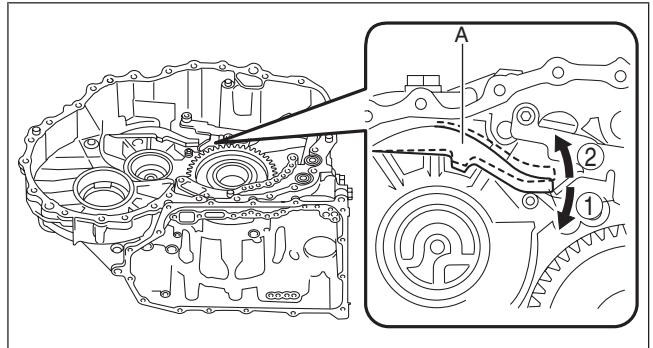


bgw3ja00000338

- (2) To verify that the parts are securely assembled, move the parking pawl in the direction of (1) by hand, and verify that the parking pawl returns to its original position (direction (2)) when removing your hand.

A : Parking pawl

- If there is a malfunction, remove the pawl return springs and reassemble.



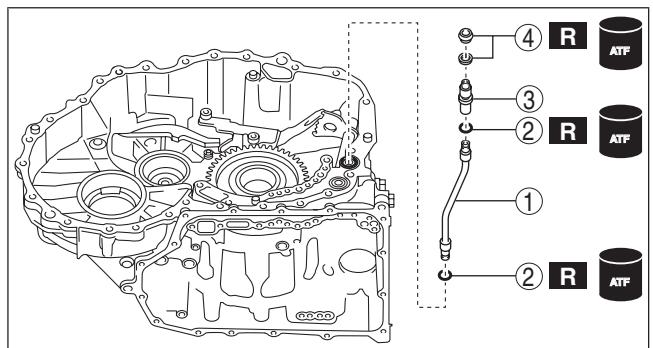
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19. Assemble the connector, new gaskets, the oil pipe, and new O-rings using the following procedure:

Caution

- If a gasket is reused it could cause ATF leakage, therefore use a new gasket.
- If an O-ring is reused it could cause ATF leakage, therefore use a new O-ring.

- (1) Apply ATF (ATF FZ) to the new gaskets and new O-rings.



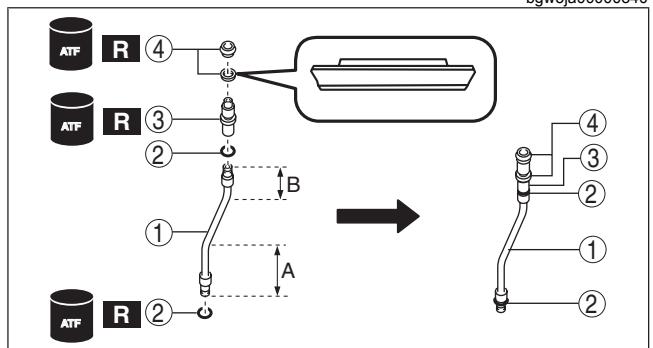
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- (2) Assemble the connector, new gaskets, the oil pipe, and new O-rings using the following procedure:

A : Long

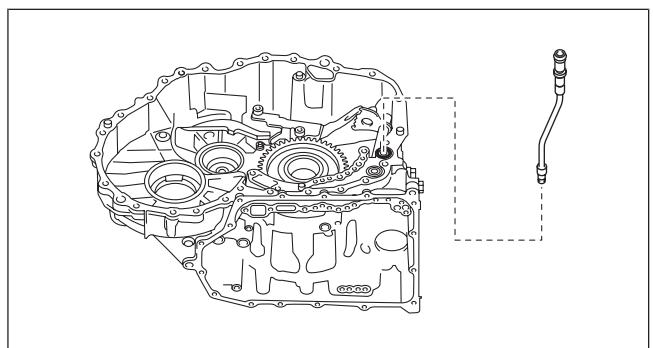
B : Short

1	Oil pipe
2	O-ring (outer diameter approx. 11.6 mm {0.457 in}, thickness approx. 1.9 mm {0.075 in})
3	Connector
4	Gasket



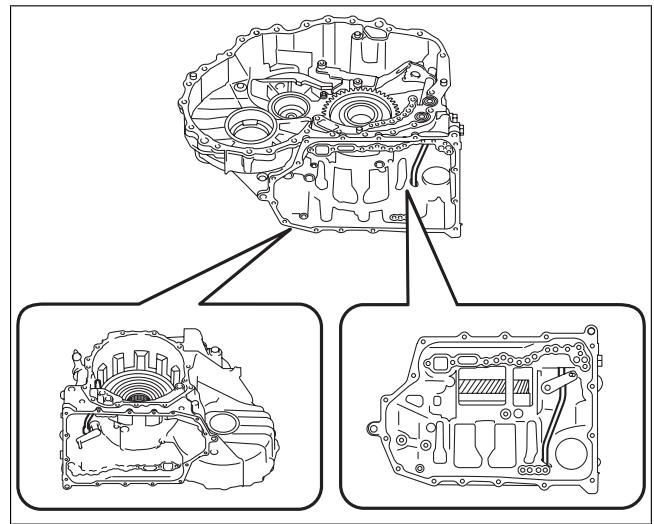
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- (3) Assemble the parts assembled together in Step (2).



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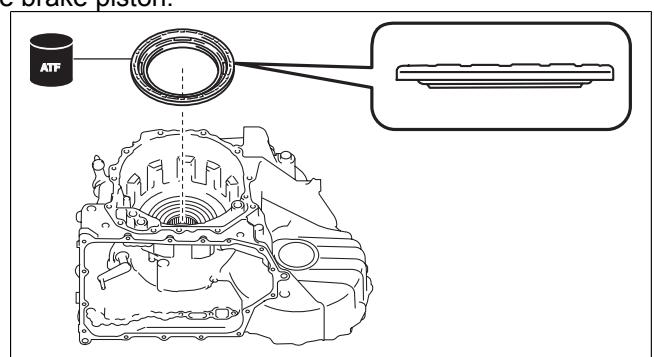
1	Oil pipe
2	O-ring (outer diameter approx. 11.6 mm {0.457 in}, thickness approx. 1.9 mm {0.075 in})
3	Connector
4	Gasket



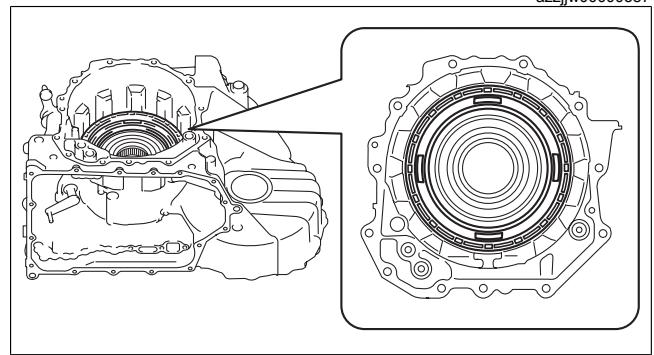
bgw3ja00000342

20. Assemble the low and reverse brake piston using the following procedure:

- (1) Apply ATF (ATF FZ) to the lip of the low and reverse brake piston.
- (2) Assemble the low and reverse brake piston.



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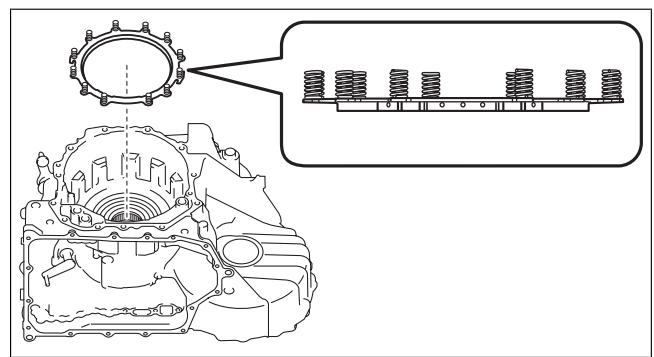


azzjw00000588

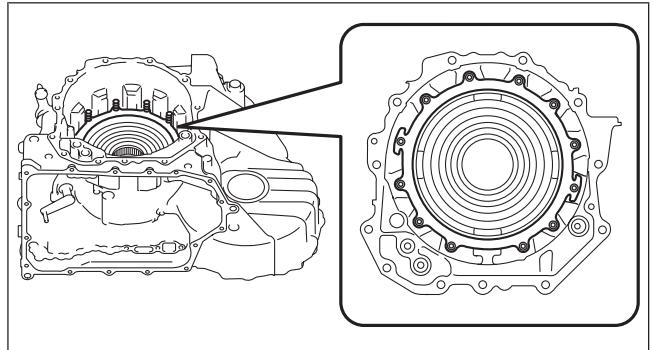
21. Assemble the springs and retainer component.

Note

- Springs and retainer component size: Inner diameter approx. 155.3 mm {6.114 in}



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azjjw00000590

22. Assemble the drive plates and driven plates using the following procedure:

Note

- Drive plate size: Outer diameter approx. 174.1 mm {6.854 in}
- Driven plate size: Inner diameter approx. 149.6 mm {5.890 in}

(1) Apply ATF (ATF FZ) to the drive plates and driven plates.

Caution

- If the drive plate is replaced with a new one, immerse it in ATF (ATF FZ) for 2 hours or more to permeate the facing with ATF.

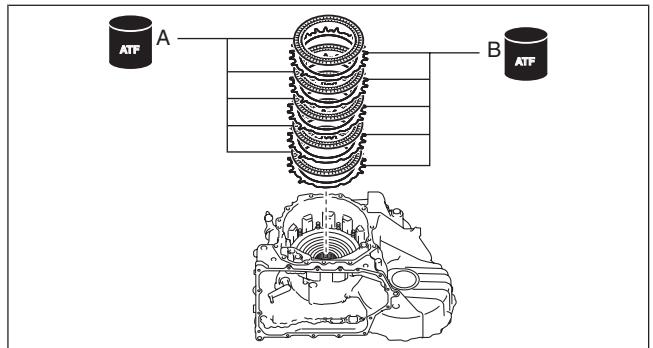
(2) Assemble the drive plates and driven plates.

Assembly order

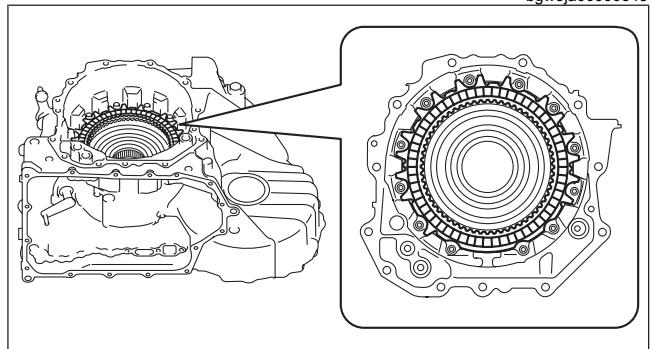
Driven plate—drive plate—driven plate—drive plate—driven plate—drive plate—driven plate—drive plate
—driven plate—drive plate

A : Drive plate

B : Driven plate

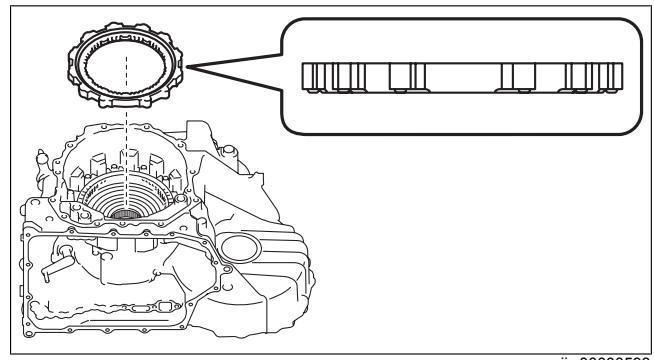


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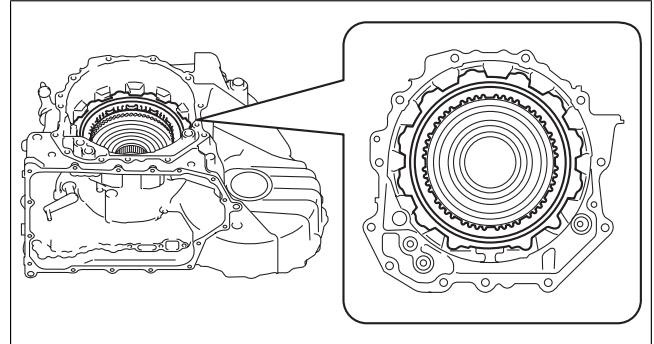


azjjw00000592

23. Assemble the one-way clutch.



azzjjw00000593



azzjjw00000594

24. Assemble the snap ring using the following procedure:

Note

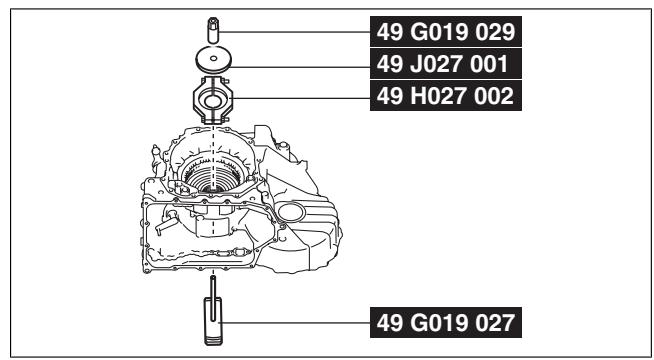
- Snap ring size: Outer diameter approx. 198.0 mm {7.795 in}

(1) Measure the low and reverse brake clearance and select the appropriate snap ring. (See LOW AND REVERSE BRAKE CLEARANCE MEASUREMENT/ADJUSTMENT.)

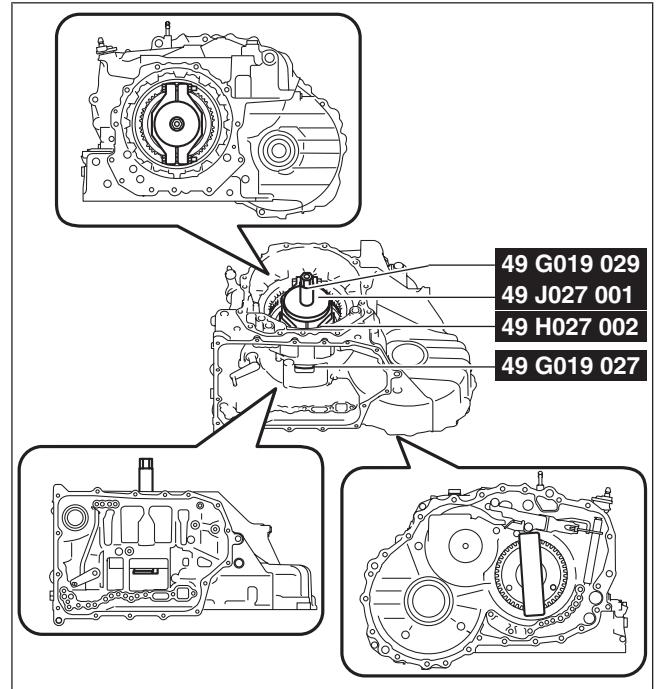
Note

- If the snap ring is assembled for the low and reverse brake clearance measurement/adjustment, the following snap ring assembly procedure is not necessary.

(2) Install the SSTs.



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bgw3ja00000345

- (3) Tighten the SST (49 G019 029) until the snap ring groove of the transaxle case comes out.

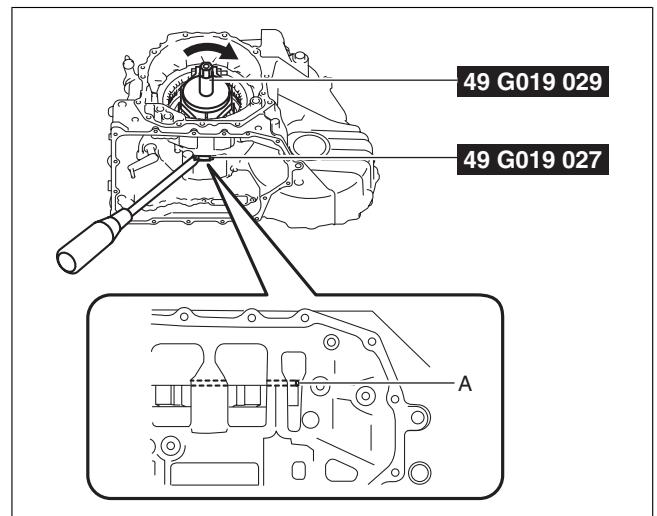
Caution

- If the SST (49 G019 029) is tightened with excessive force, surrounding parts could be damaged.
Stop tightening the SST when the snap ring groove of the transaxle case comes out.

Note

- Lock the SST (49 G019 027) against rotation using a flathead screwdriver and tighten the SST (49 G019 029).

A : Snap ring groove



bgw3ja00000346

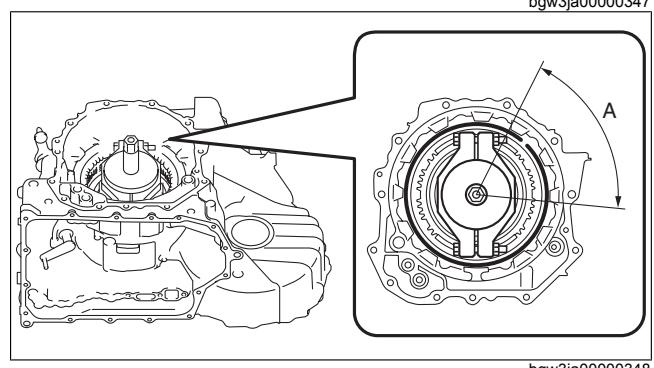
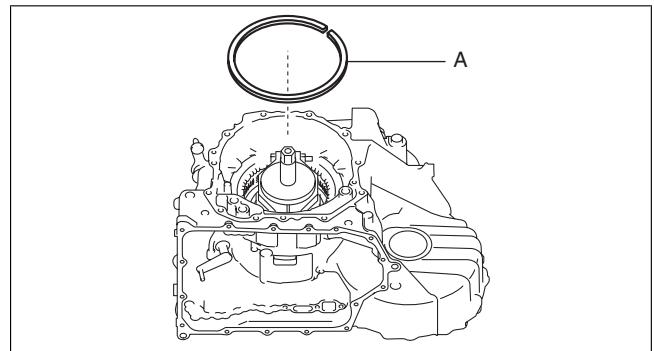
- (4) Assemble the selected snap ring in Step (1) to the position shown in the figure.

Caution

- Assemble the snap ring so that the end gap of the snap ring is in the area shown in the figure.
- After assembling the snap ring, verify that the snap ring is securely inserted into the bottom of the snap ring groove.

A : Snap ring (selection)

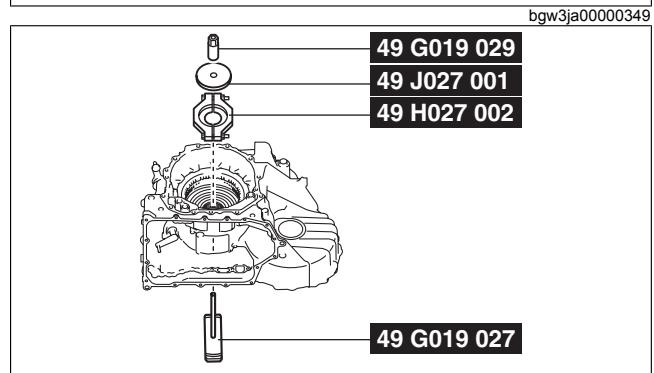
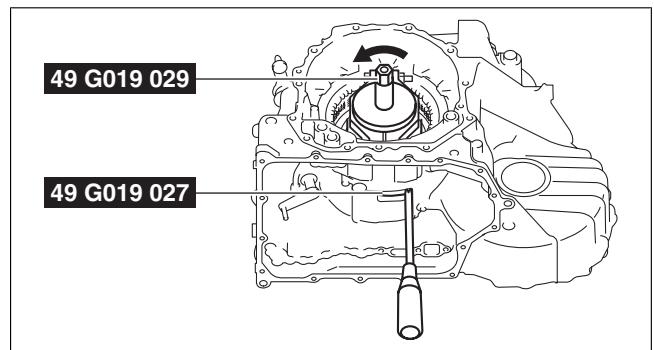
A : End gap of snap ring assembly area



(5) Loosen the SST (49 G019 029) and remove the SSTs.

Note

- Lock the SST (49 G019 027) against rotation using a flathead screwdriver and loosen the SST (49 G019 029).



25. Perform a operation verification of the low and reverse brake using the following procedure:

- (1) Blow compressed air into the oil passage shown in the figure and verify the operation condition of the low and reverse brake.

Warning

- Always wear protective eye wear when using the air compressor. Otherwise, ATF or dirt particles blown off by the air compressor could get into the eyes.

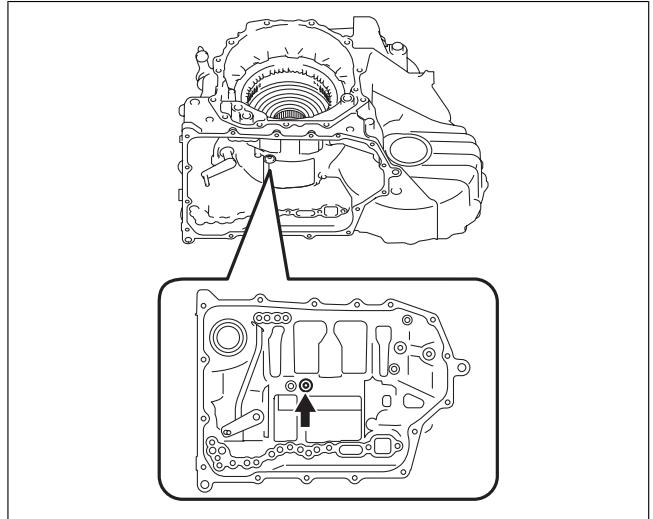
Caution

- To prevent damage to parts, always use an air compressor which is adjusted to the indicated pressure.

Compressed air pressure

0.39—0.44 MPa {4.0—4.4 kgf/cm², 57—63 psi}

- If there is a malfunction, perform disassembly again, verify the cause and repair the applicable part. (See AUTOMATIC TRANSAXLE DISASSEMBLY.)



bgw2za000000024

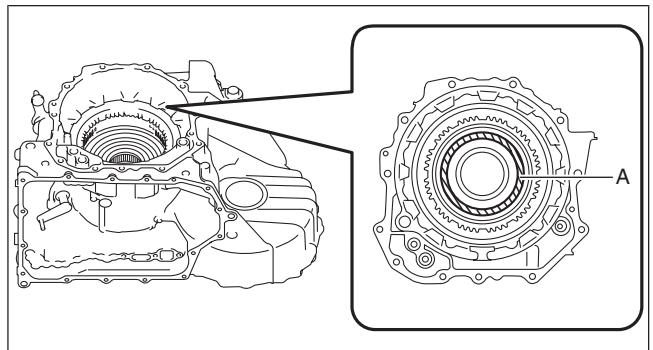
26. Apply ATF to the angular contact ball bearing using the following procedure:

Caution

- To reduce error during the secondary gear and output gear preload measurement, accurately perform the following procedure:

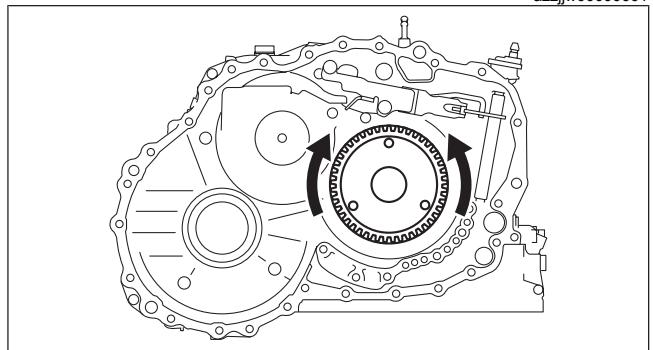
- (1) Apply ATF (ATF FZ) to the angular contact ball bearing ball.

A : ATF application area



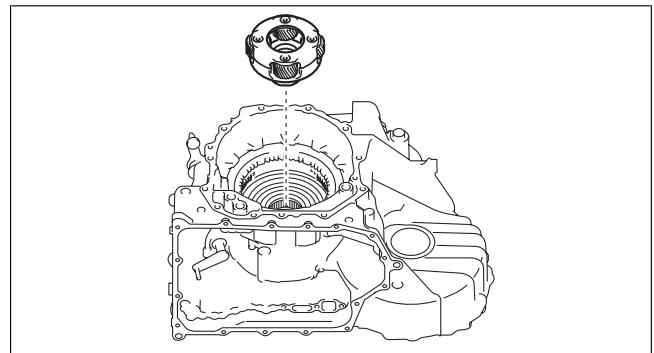
azzjw00000601

- (2) Rotate the primary gear and apply ATF to the angular contact ball bearing.

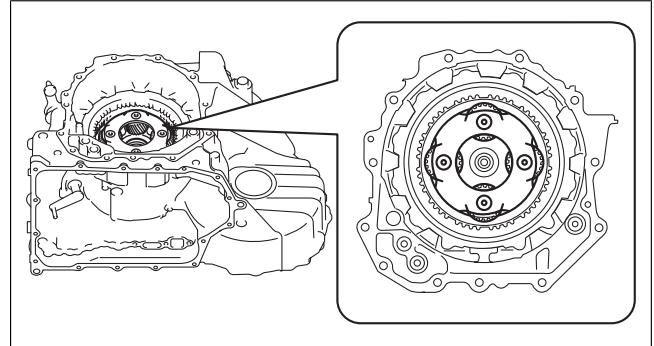


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27. Assemble the front planetary gear.



bgw3ja00000351



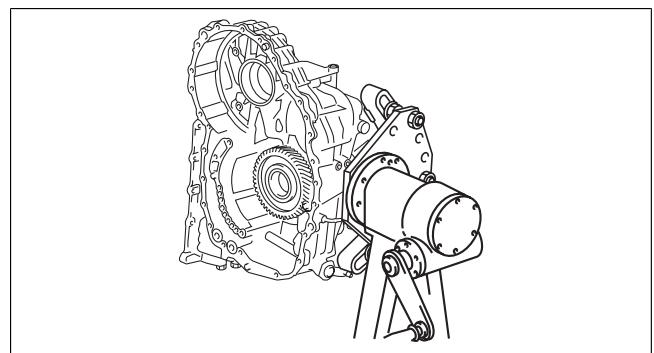
bgw3ja00000352

28. Assemble a new locknut using the following procedure:

Caution

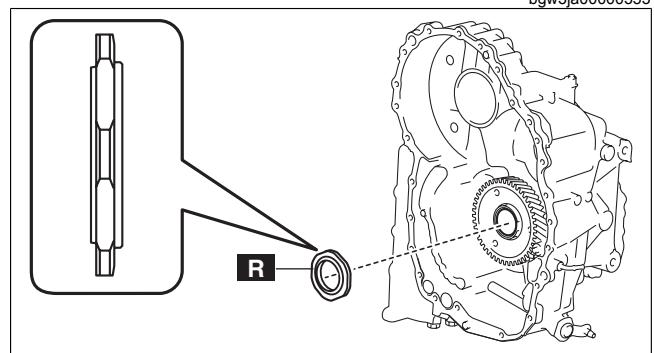
- Because the front planetary gear will drop if the end cover side is pointed downward before assembling the locknut, rotate the engine stand rotation handle, adjust so that the end cover side is situated sideways, and assemble the locknut.
- Always use a new locknut. If the removed locknut is reused, it may cause a transaxle malfunction.
- For tightening the locknut, 321—345 N·m {33—35 kgf·m, 237—254 ft·lbf} torque is required. For safety purposes, perform the procedure using two people, one tightens the locknut and the other supports the engine stand (transaxle case).

- (1) Rotate and adjust the rotation handle of the engine stand so that the end cover side is situated sideways.



bgw3ja00000353

- (2) Assemble and temporarily tighten a new locknut.



bgw3ja00000354

- (3) Install the SSTs.

Note

- Engage the three projections of the SST (49 B019 028) to the three holes of the primary gear.

- When installing the SST (49 B019 029), use the bolts supplied with the SST (49 B019 029), or M8×1.25 bolt, length 18 mm {0.71 in}.

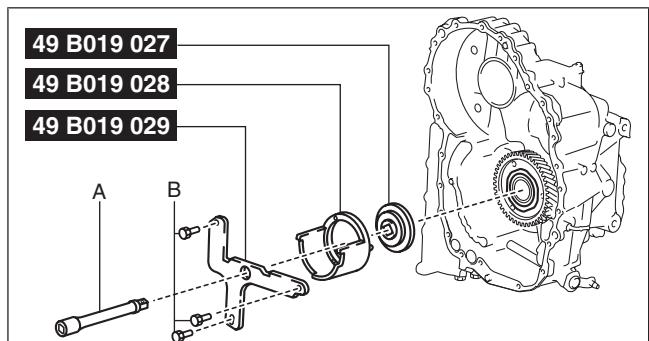
A : Extension bar

B : Bolt supplied with SST (49 B019 029), or M8×1.25 bolt, length 18 mm {0.71 in}

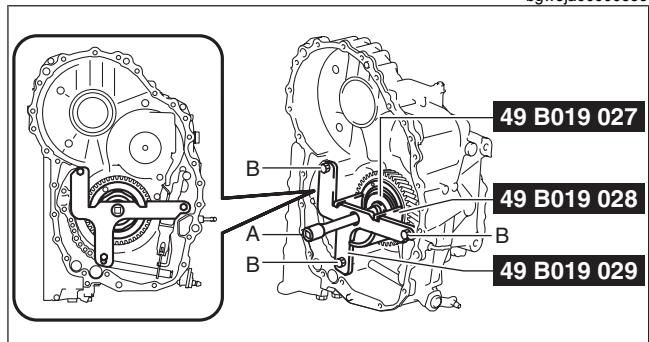
A : Extension bar

B : Bolt supplied with SST (49 B019 029), or M8×1.25 bolt, length 18 mm {0.71 in}

**SST installation bolt tightening torque
19—25 N·m {2.0—2.5 kgf·m, 15—18 ft·lbf}**



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bgw3ja00000356

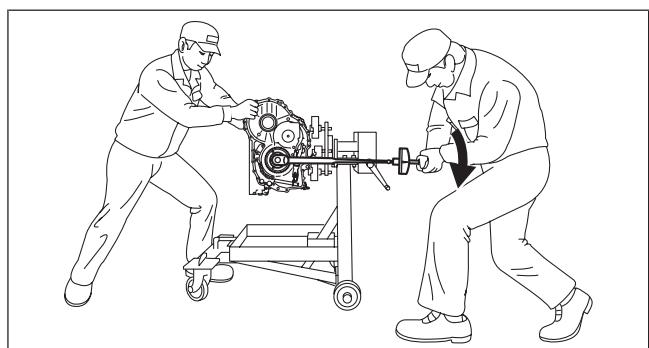
(4) Tighten the locknut.

Caution

- For tightening the locknut, 321—345 N·m {33—35 kgf·m, 237—254 ft·lbf} torque is required. For safety purposes, perform the procedure using two people, one tightens the locknut and the other supports the engine stand (transaxle case).

Tightening torque

321—345 N·m {33—35 kgf·m, 237—254 ft·lbf}

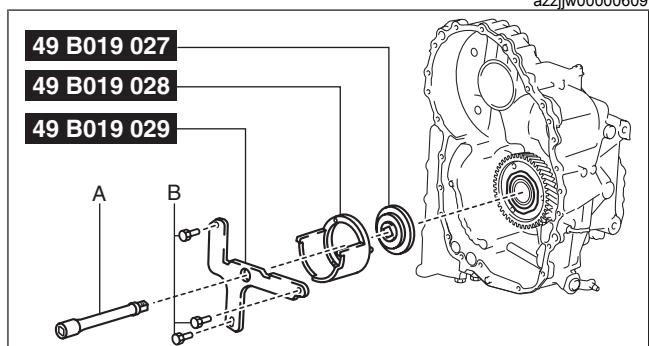


azzjw00000609

(5) Remove the SSTs.

A : Extension bar

B : Bolt supplied with SST (49 B019 029), or M8×1.25 bolt, length 18 mm {0.71 in}

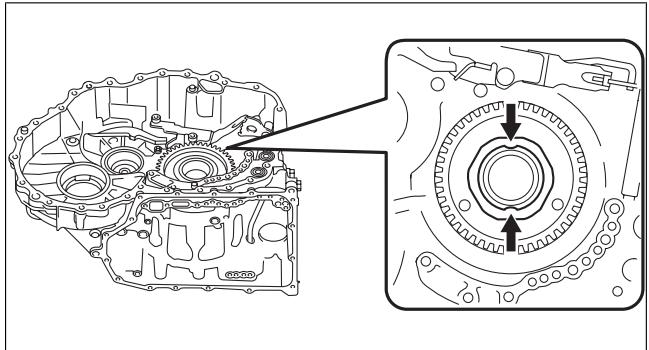


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(6) Crimp the locknut at the two positions shown in the figure using a pin punch.

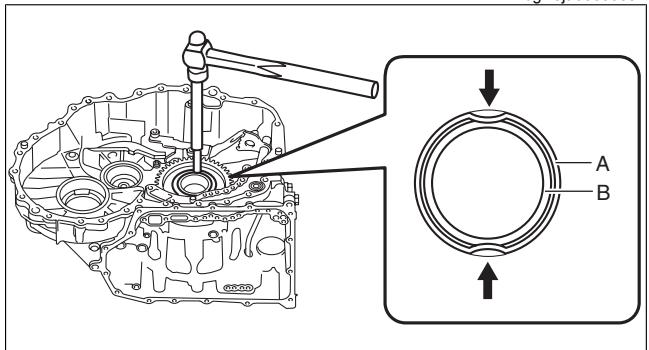
Note

- Crimp the locknut flange until it contacts the whole groove of the front planetary gear end.



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A : Locknut flange
B : Front planetary gear end



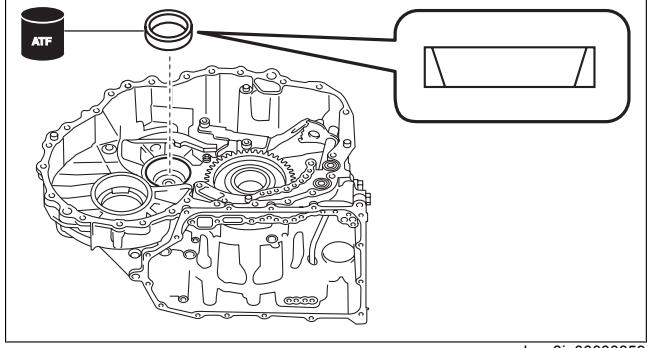
bgw3ja00000358

29. Assemble the bearing race using the following procedure:

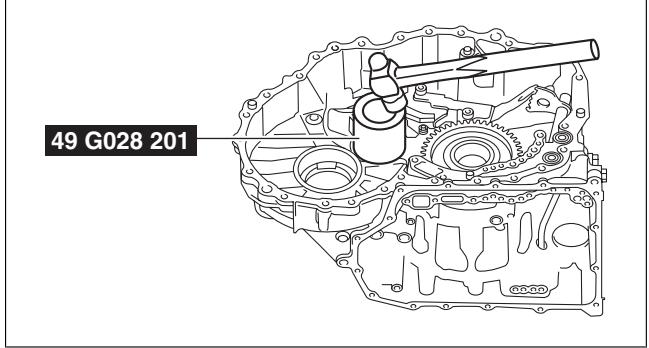
Note

- Bearing race size: Outer diameter approx. 72 mm {2.8 in}

- Apply ATF (ATF FZ) to the engagement area of the bearing race and transaxle case.
- Assemble the bearing race using the SST.



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bgw3ja00000360

30. Assemble the bearing race and a new shim using the following procedure:

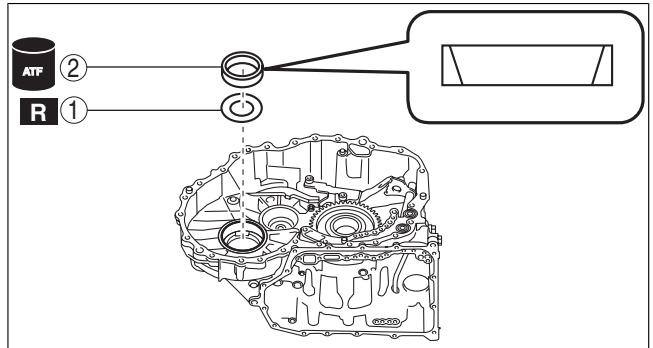
Caution

- Always use a new shim. If a deformed shim is reused, it may cause a transaxle malfunction.**

- Apply ATF (ATF FZ) to the engagement area of the bearing race and transaxle case.
- Using the SSTs, assemble the bearing race and a new shim using the following procedure:

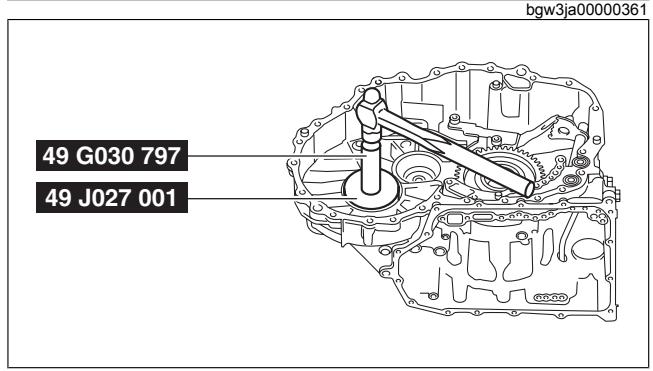
Caution

- After assembling the bearing race and a new shim, verify that the shim does not move. If the shim moves, press the bearing race again using the SSTs.



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1	Shim (outer diameter approx. 89 mm {3.5 in}, thickness approx. 0.5 mm {0.02 in})
2	Bearing race (outer diameter approx. 90 mm {3.5 in}, width approx. 17.25 mm {0.6791 in})



bgw3ja00000362

31. Assemble a new oil seal using the following procedure:

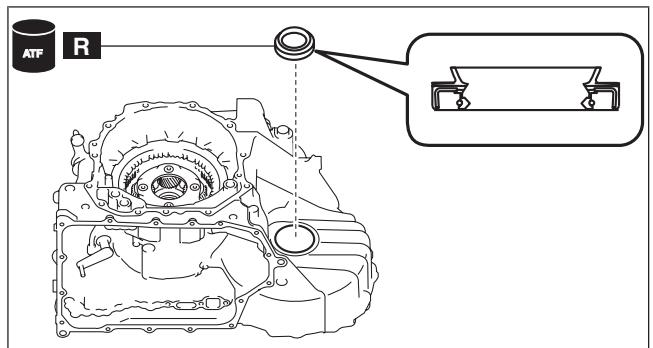
Caution

- If an oil seal is reused it could cause ATF leakage, therefore use a new oil seal.

Note

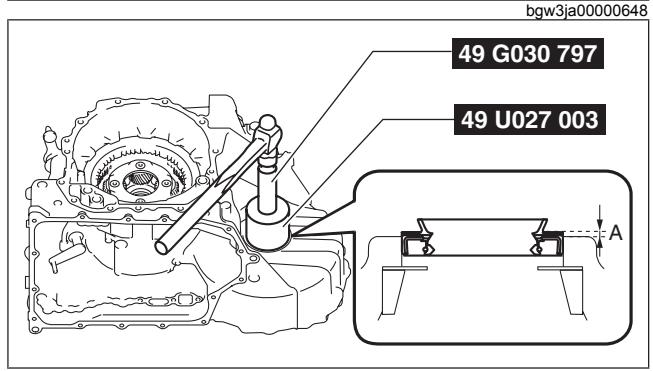
- Oil seal size: Outer diameter approx. 63 mm {2.5 in}

- (1) Apply ATF (ATF FZ) to the engagement area of the new oil seal and transaxle case.
- (2) Apply ATF (ATF FZ) to the lip of the new oil seal.
- (3) Assemble the new oil seal to the position shown in the figure using the SSTs.



bgw3ja00000648

A : -0.8—0.5 mm {-0.03—0.01 in}



bgw3ja00000649

32. Press the angular contact ball bearing to the primary gear side using the following procedure:

Caution

- To reduce error during the total end play measurement, accurately perform the following procedure:

Note

- Work overview

— There is a gap between the snap ring groove of the angular contact ball bearing, snap ring, and the snap ring groove of the transaxle case because the angular contact ball bearing is fixed to the transaxle case by the snap ring.

The gap causes an error during the total end play measurement.

Using the following procedure, the error during the total end play measurement is reduced by moving the angular contact ball bearing to the standard position.

A : Transaxle case

B : Snap ring

C : Angular contact ball bearing

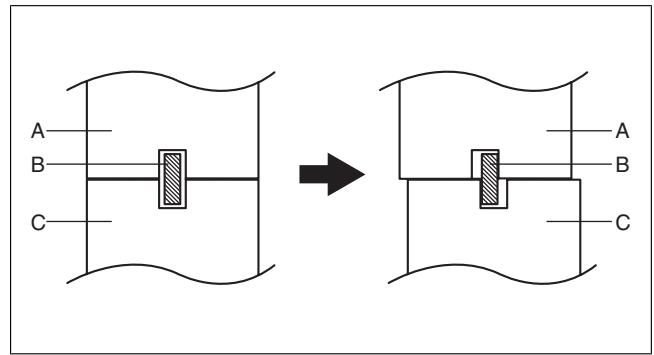
- (1) Press the angular contact ball bearing to the primary gear side using the SSTs.

Caution

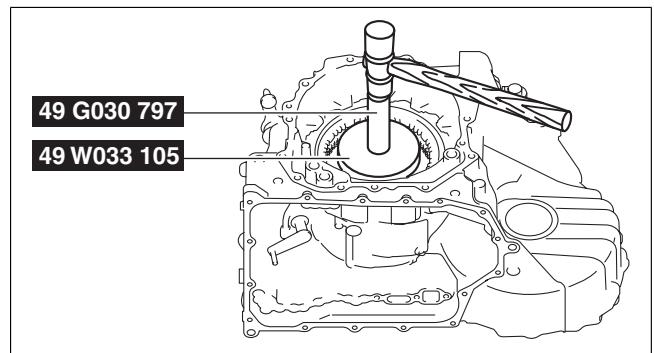
- Do not strongly tap the SST contacting the front planetary gear to prevent damage to the parts.

Note

- Lightly tap the SST contacting the front planetary gear 2—3 times using a plastic hammer and press the angular contact ball bearing to the primary gear side.



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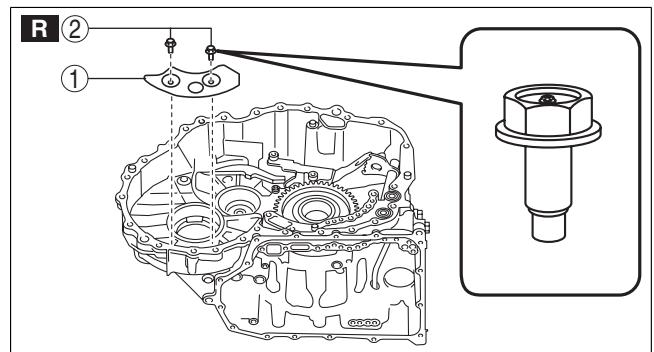
azzjw00000619

33. Assemble the baffle plate using the procedure shown in the figure.

Caution

- The bolts for the baffle plate assembly are coated with thread-locking compound. If the bolts are reused it could loosen the bolts, therefore use new bolts.

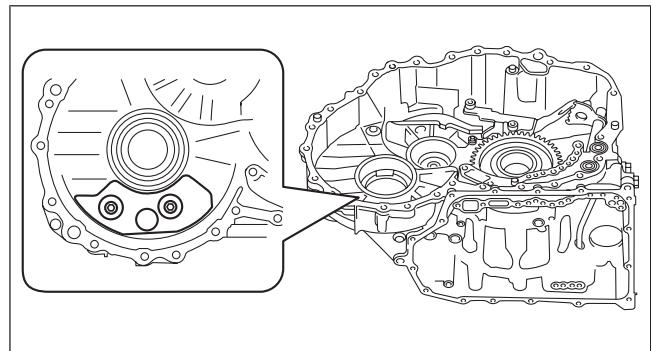
* : Length without spring washer is indicated due to bolt with spring washer. Length with spring washer is approx. 13 mm {0.51 in}.



bgw3ja00000365

Baffle plate assembly bolt tightening torque
8—10 N·m {82—101 kgf·cm, 71—88 in·lbf}

1	Baffle plate
2	Bolt (M6×1.0 bolt, length approx. 15 mm {0.59 in}*)



bgw3ja00000366

34. Assemble the accessories included in the converter housing using the following procedure:

(1) Assemble the bearing race and a new shim using the following procedure:

Caution

- Always use a new shim. If a deformed shim is reused, it may cause a transaxle malfunction.

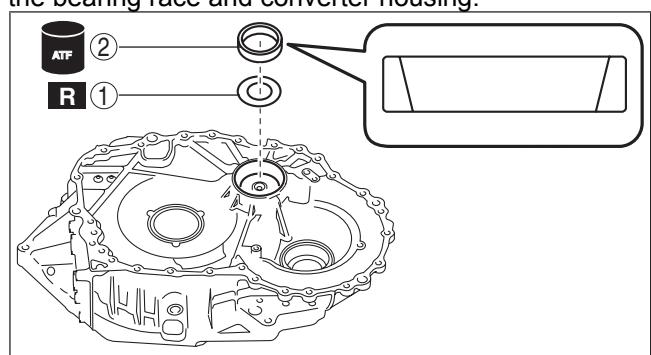
1) Measure the secondary gear and output gear preload and select the appropriate new shim. (See SECONDARY GEAR AND OUTPUT GEAR PRELOAD MEASUREMENT/ADJUSTMENT.)

Note

- If the bearing race and a new shim are assembled for the secondary gear and output gear preload measurement/adjustment, the following assembly procedure for the bearing race and a new shim is not necessary.

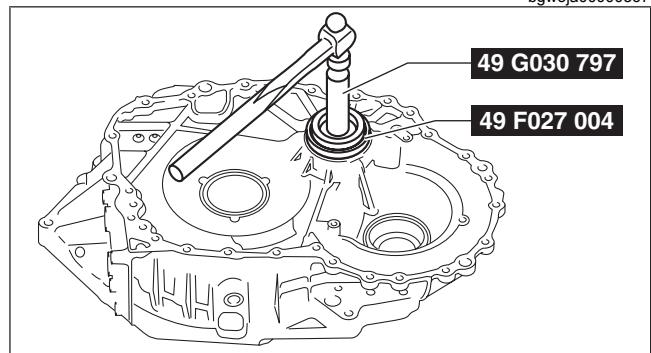
2) Apply ATF (ATF FZ) to the engagement area of the bearing race and converter housing.

3) Using the SSTs, assemble the bearing race and the selected new shim in Step 1) using the following procedure:



bgw3ja00000367

1	Shim (outer diameter approx. 81 mm {3.2 in}) (selection)
2	Bearing race (outer diameter approx. 82 mm {3.2 in})



bgw3ja00000368

(2) Assemble the bearing race and a new shim using the following procedure:

Caution

- Always use a new shim. If a deformed shim is reused, it may cause a transaxle malfunction.

1) Measure the ring gear and differential preload and select the appropriate new shim. (See RING GEAR AND DIFFERENTIAL PRELOAD MEASUREMENT/ADJUSTMENT.)

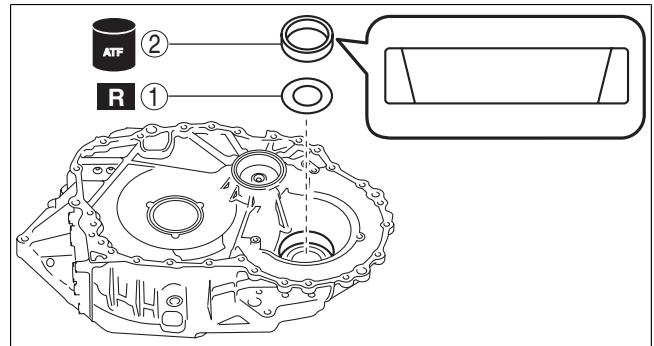
Note

- If the bearing race and a new shim are assembled for the ring gear and differential preload measurement/adjustment, the following assembly procedure for the bearing race and a new shim is not necessary.

-
- 2) Apply ATF (ATF FZ) to the engagement area of the bearing race and converter housing.
 - 3) Using the SSTs, assemble the bearing race and the selected new shim in Step 1) using the following procedure:

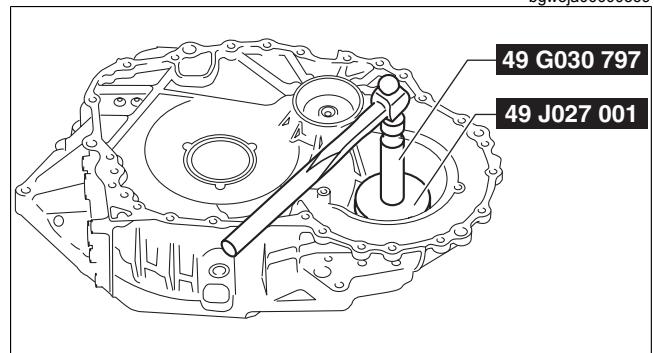
Caution

- After assembling the bearing race and a new shim, verify that the shim does not move. If the shim moves, press the bearing race again using the SSTs.



bgw3ja00000369

1	Shim (outer diameter approx. 89 mm {3.5 in}) (selection)
2	Bearing race (outer diameter approx. 90 mm {3.5 in}, width approx. 21 mm {0.83 in})



bgw3ja00000370

- (3) Assemble a new oil seal using the following procedure:

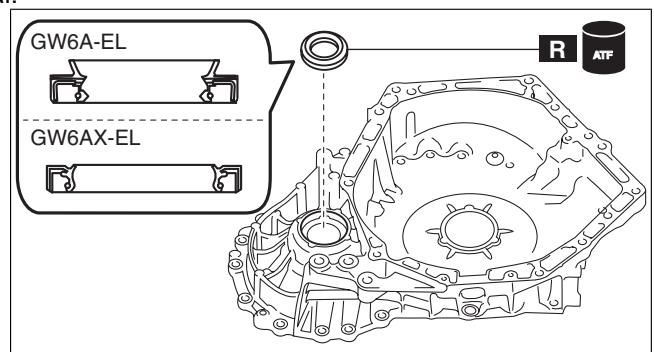
Caution

- If an oil seal is reused it could cause ATF leakage, therefore use a new oil seal.

Note

- Oil seal size: Outer diameter approx. 65 mm {2.6 in} (GW6A-EL), outer diameter approx. 67 mm {2.6 in} (GW6AX-EL)

- 1) Apply ATF (ATF FZ) to the engagement area of the new oil seal and converter housing.
- 2) Apply ATF (ATF FZ) to the lip of the new oil seal.
- 3) Assemble the new oil seal to the position shown in the figure using the SSTs.

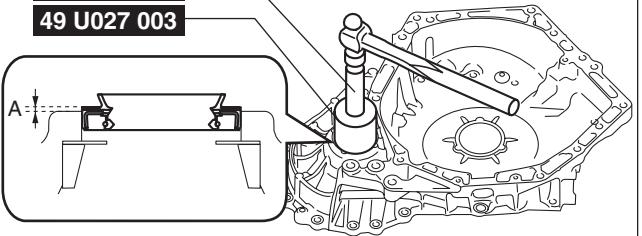


bgw3ja00000650

A : -0.8—0.5 mm {-0.03—0.01 in} (GW6A-EL)
 B : 0.5—1.5 mm {0.02—0.05 in} (GW6AX-EL)

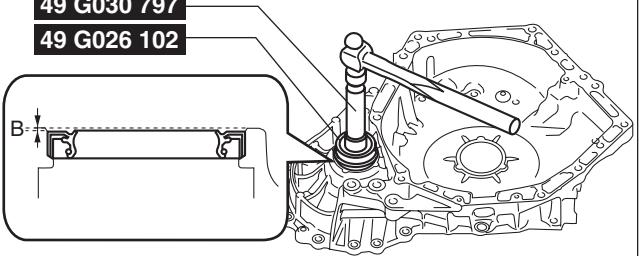
GW6A-EL

49 G030 797
 49 U027 003



GW6AX-EL

49 G030 797
 49 G026 102

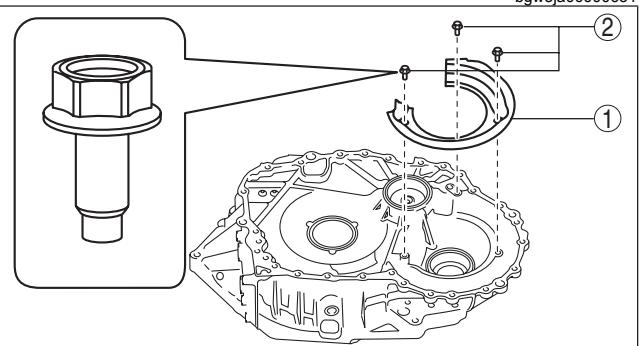


bgw3ja00000651

- 4) Assemble the baffle plate using the procedure shown in the figure.

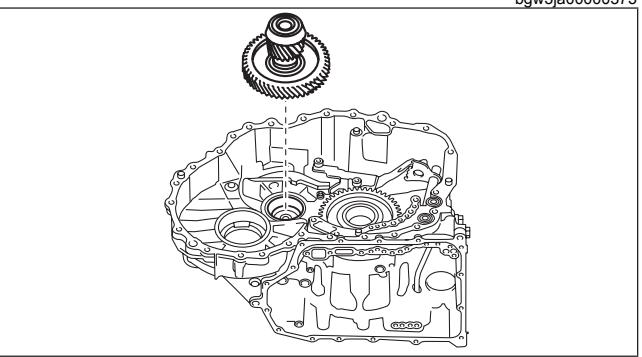
Baffle plate assembly bolt tightening torque
 8—10 N·m {82—101 kgf·cm, 71—88 in·lbf}

1	Baffle plate
2	Bolt (M6×1.0 bolt, length approx. 14 mm {0.55 in})

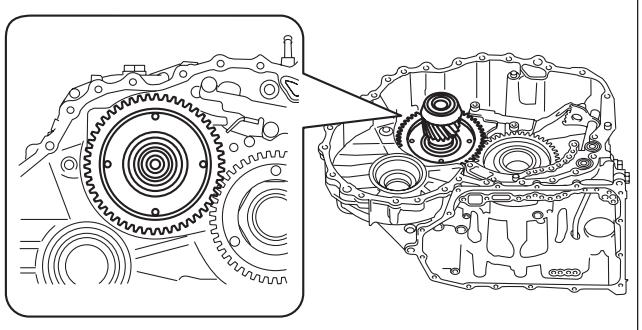


bgw3ja00000373

35. Assemble the secondary gear and output gear.



bgw3ja00000374

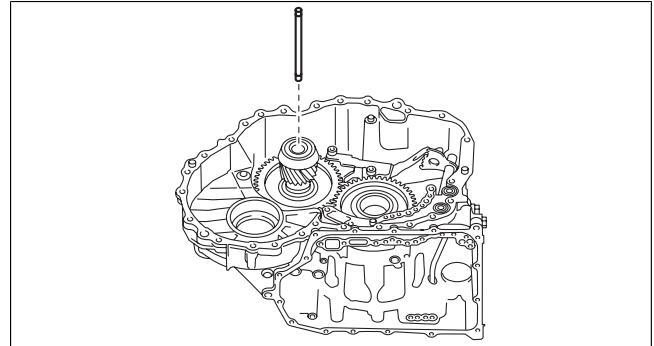


bgw3ja00000375

36. Assemble the oil pipe.

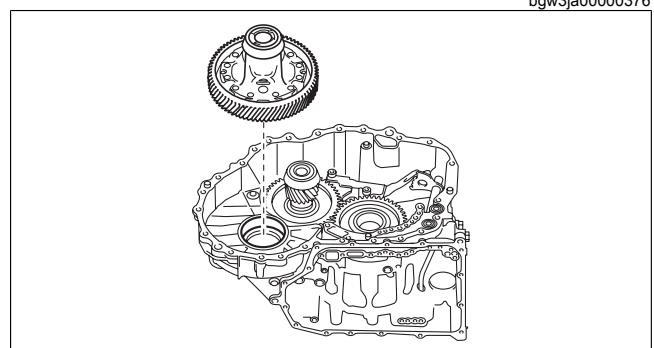
Caution

- Do not assemble the oil pipe using a tool such as a hammer to prevent damaging the part. For the oil pipe assembly, it is better to only use your hands to put the oil pipe into the output gear.

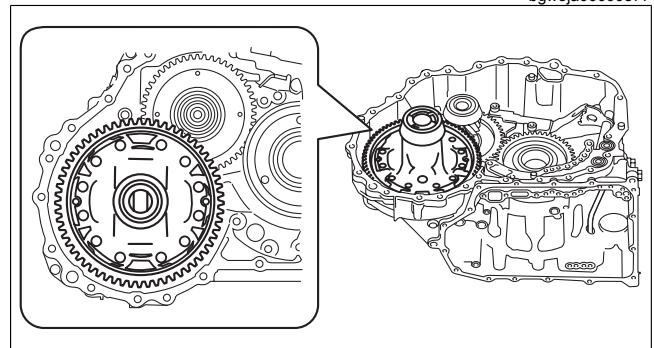


bgw3ja00000376

37. Assemble the ring gear and differential.



bgw3ja00000377

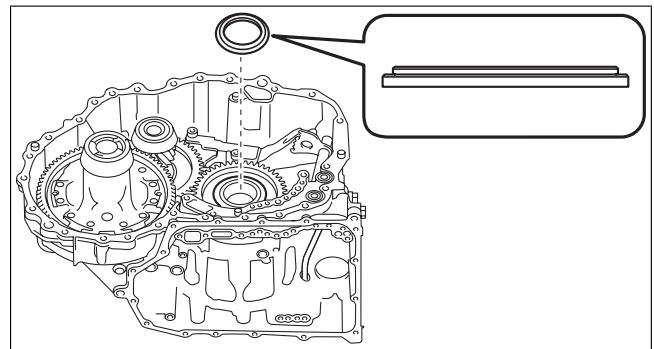


bgw3ja00000378

38. Assemble the thrust needle bearing.

Note

- Thrust needle bearing size: Outer diameter approx. 80.3 mm {3.16 in}



bgw3ja00000379

39. Assemble a new D-ring and new seal rings to the turbine shaft using the following procedure:

Caution

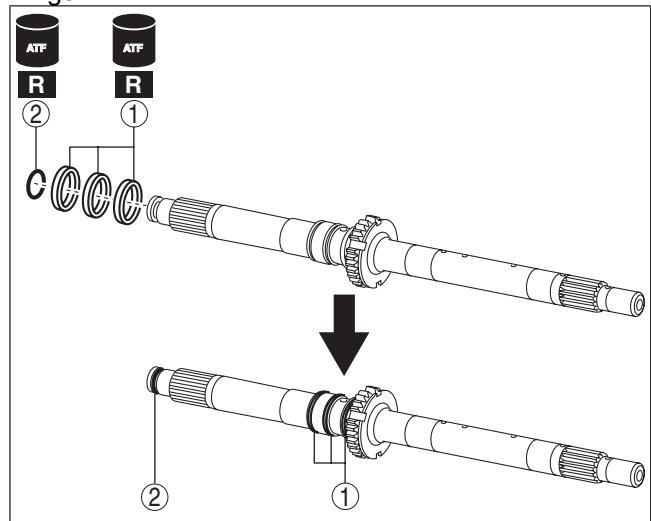
- If a D-ring is reused it could cause ATF leakage, therefore use a new D-ring.

- If a seal ring is reused it could cause ATF leakage, therefore use a new seal ring.

(1) Apply ATF (ATF FZ) to the new D-ring and new seal rings.

(2) Assemble the new D-ring and new seal rings to the turbine shaft using the procedure shown in the figure:

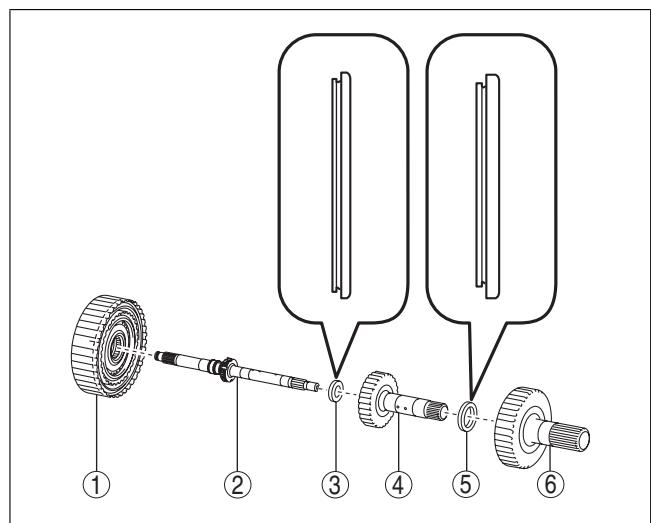
1	Seal ring (outer diameter approx. 27.9 mm {1.10 in}, thickness approx. 1.5 mm {0.059 in})
2	D-ring (outer diameter approx. 16.4 mm {0.646 in}, thickness approx. 2.4 mm {0.094 in})



azzjjw00000635

40. Assemble together the clutch component, turbine shaft, high clutch hub, low clutch hub, and thrust needle bearings using the following procedure:

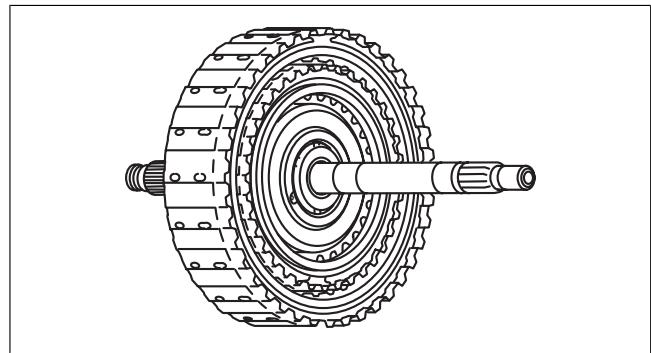
(1) Assemble the parts using the procedure shown in the figure:



azzjjw00001563

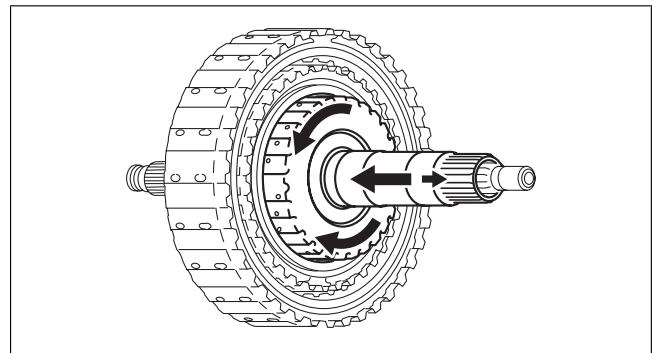
Note

- For the high clutch hub and low clutch hub assembly, assembly is easier if the work is performed using the following procedure:
 - High clutch hub
 1. Place the assembled parts on the workbench with the clutch component situated sideways.

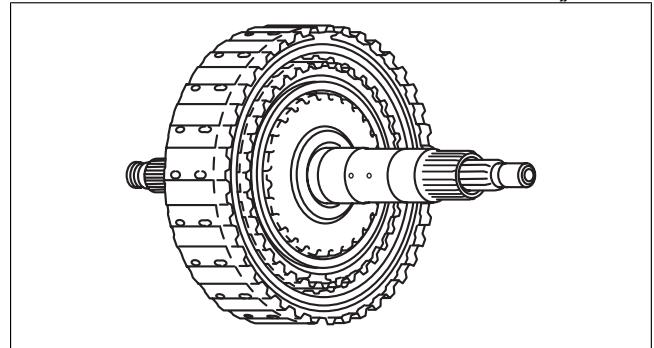


azzjjw00000638

2. While rotating the high clutch hub, engage the splines of each of the high clutch drive plates one by one, and assemble.
- Low clutch hub
1. Place the assembled parts on the workbench with the clutch component situated sideways.

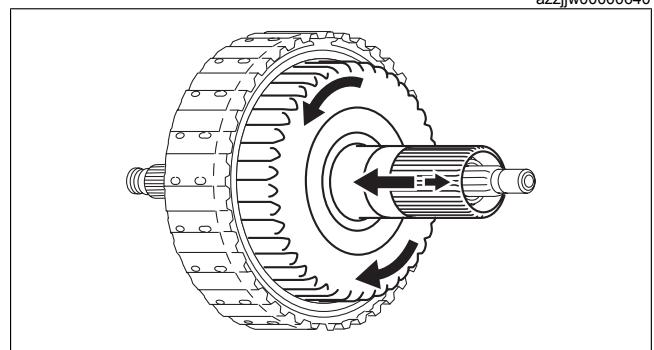


azzjw00000639



azzjw00000640

2. While rotating the low clutch hub, engage the splines of each of the low clutch drive plates one by one, and assemble.



azzjw00000641

1	Clutch component
2	Turbine shaft
3	Thrust needle bearing (outer diameter approx. 37.3 mm {1.47 in})
4	High clutch hub
5	Thrust needle bearing (outer diameter approx. 51.3 mm {2.02 in})
6	Low clutch hub

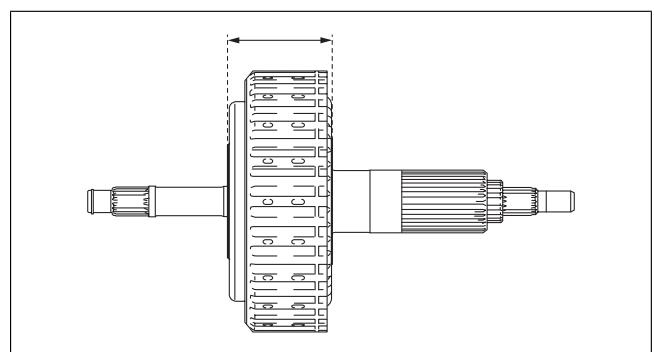
(2) To verify that the parts are securely assembled together, measure the distance shown in the figure.

Note

- Recommended measuring instrument: Vernier caliper

Specification
63.6—65.8 mm {2.51—2.59 in}

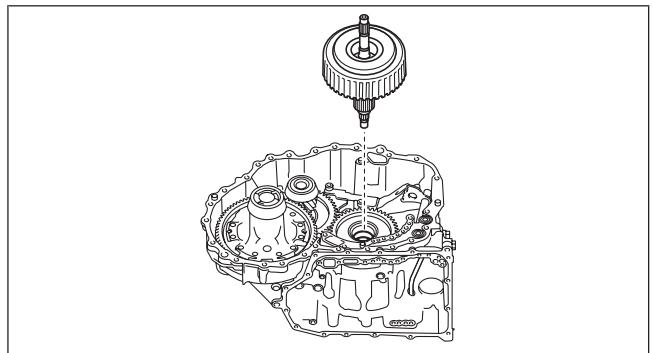
- If not within the specification, disassemble the assembled parts and reassemble.



azzjw00000637

41. Assemble the parts which were assembled together in Step 40 using the following procedure:

- (1) Assemble the parts assembled together in Step 40.



bgw3ja00000380

- (2) To verify that the parts are securely assembled, measure the distance shown in the figure.

Note

- Recommended measuring instrument: Depth gauge, straight edge ruler

A : Transaxle case end (alignment surface with converter housing)

B : Clutch component end

Specification

11.8—15.0 mm {0.465—0.590 in}

- If not within the specification, remove the parts and perform re-assembly from Step 40.

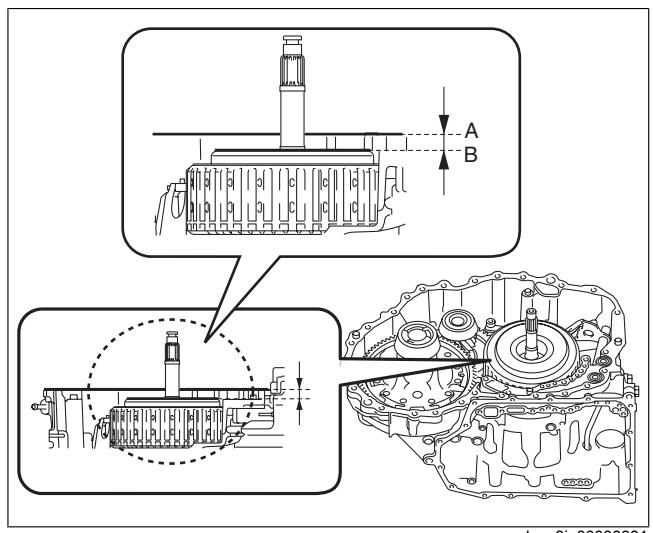
Note

- Measurement method

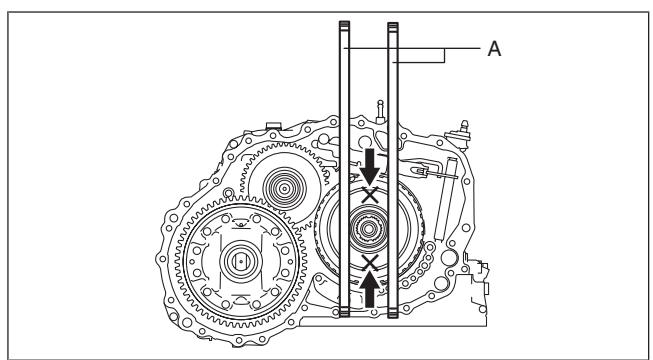
- 1) Set two straight edge rulers along the alignment surface of the transaxle case with the converter housing as shown in the figure.
- 2) Measure the positions (2 locations) shown in the figure using a depth gauge and calculate the average value.

A : Straight edge ruler

- 3) Subtract the thickness of the straight edge ruler from the average value.



bgw3ja00000381

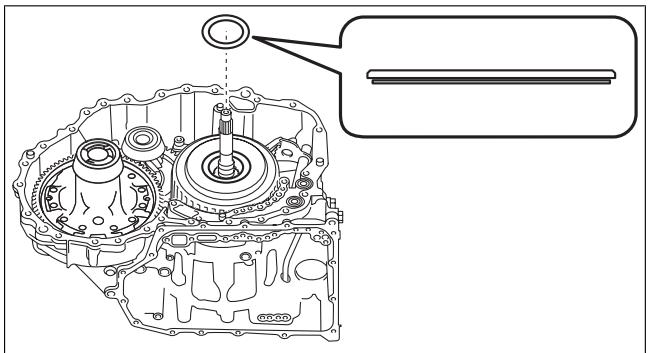


bgw3ja00000382

42. Assemble the thrust needle bearing.

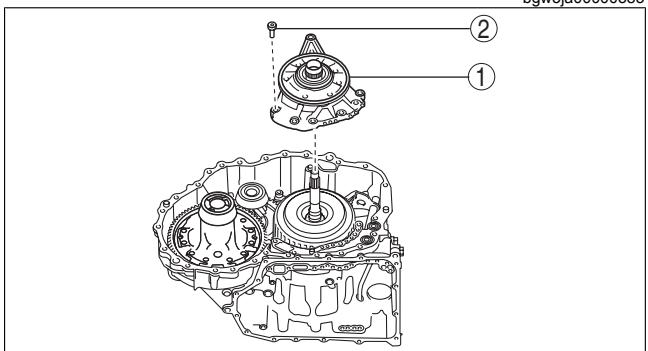
Note

- Thrust needle bearing size: Outer diameter approx. 76.7 mm {3.02 in}



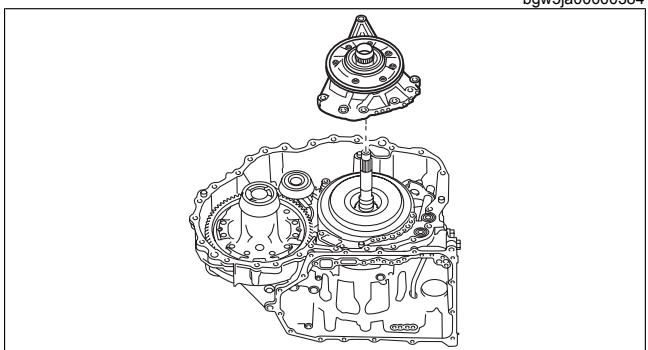
bgw3ja00000383

43. Assemble the oil pump using the following procedure:



bgw3ja00000384

(1) Assemble the oil pump.



bgw3ja00000385

(2) Assemble and tighten the bolts shown in the figure.

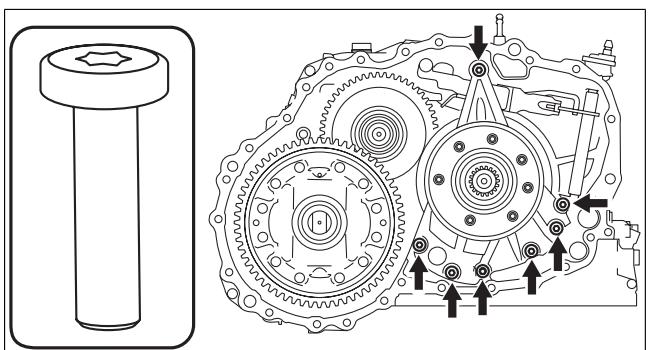
Note

- Bolt size: M8×1.25 bolt, length approx. 31 mm {1.2 in}

Tightening torque

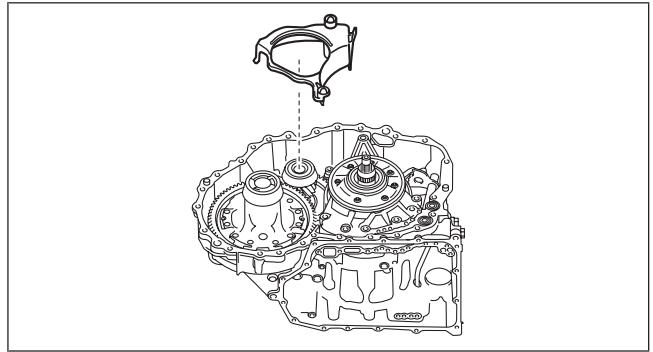
19—25 N·m {2.0—2.5 kgf·m, 15—18 ft·lbf}

1	Oil pump
2	7 bolts (M8×1.25 bolt, length approx. 31 mm {1.2 in})

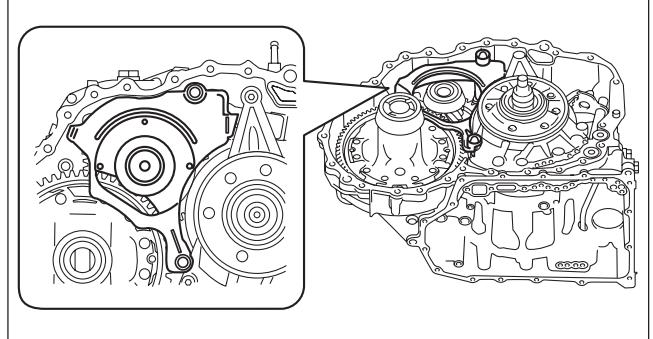


bgw3ja00000386

44. Assemble the baffle plate.



bgw3ja00000387



bgw3ja00000388

45. Assemble the converter housing using the following procedure:

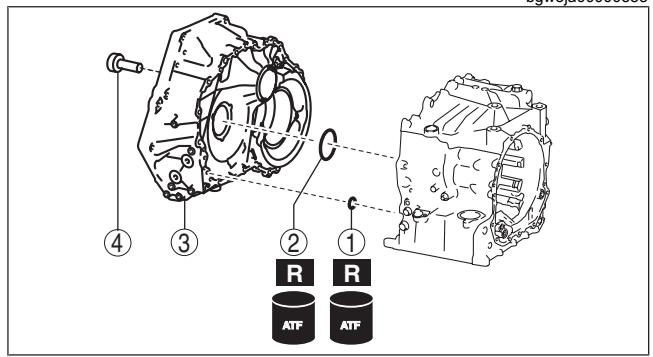
* : Of the 25 bolts, 5 are coated with sealant

(1) Assemble new O-rings using the following procedure:

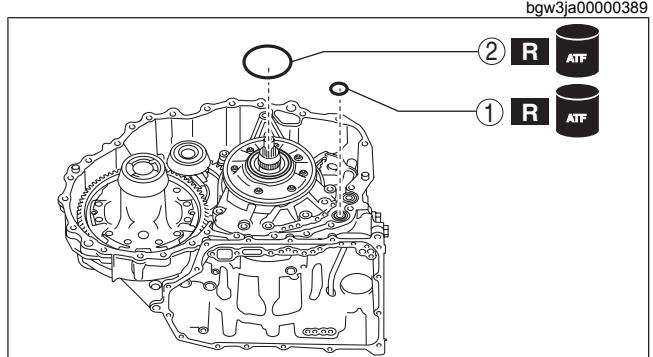
Caution

- If an O-ring is reused it could cause ATF leakage, therefore use a new O-ring.

- 1) Apply ATF (ATF FZ) to the new O-rings.
- 2) Assemble new O-rings in the order shown in the figure.



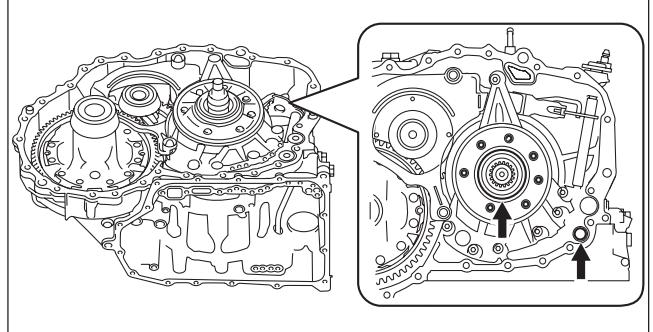
bgw3ja00000389



bgw3ja00000390

1	O-ring (outer diameter approx. 15.6 mm {0.614 in}, thickness approx. 2.4 mm {0.094 in})
2	O-ring (outer diameter approx. 73.3 mm {2.89 in}, thickness approx. 3.0 mm {0.12 in})

- (2) Remove any remaining old sealant on the contact surfaces of the transaxle case and converter housing, and degrease the contact surfaces.



bgw3ja00000391

Caution

- When degreasing and if degreaser is used, use a rag saturated with degreaser and be careful not to allow degreaser to penetrate the interior of the transaxle.
In addition, after degreasing, visually verify that there is no foreign matter (such as old sealant, cloth fibers) which has penetrated the interior of the transaxle.

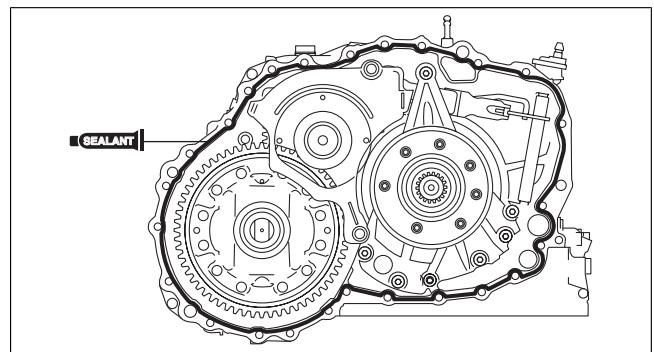
(3) Apply sealant (silicone sealant TB1217E) to the transaxle case.

Caution

- If sealant is applied excessively or applied to a part other than the indicated part, the O-ring could deform and the sealant could penetrate the oil passage. Apply an appropriate amount of sealant to the indicated part.

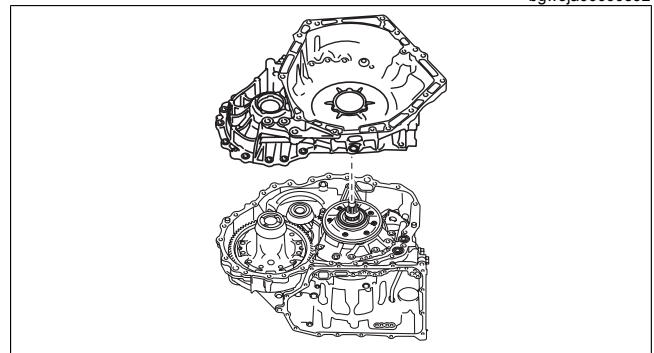
Note

- Sealant application amount (bead thickness): $\phi 1.8\text{--}2.5\text{ mm}$ {0.071—0.098 in}



bgw3ja00000392

(4) Assemble the converter housing before the applied sealant starts to harden.

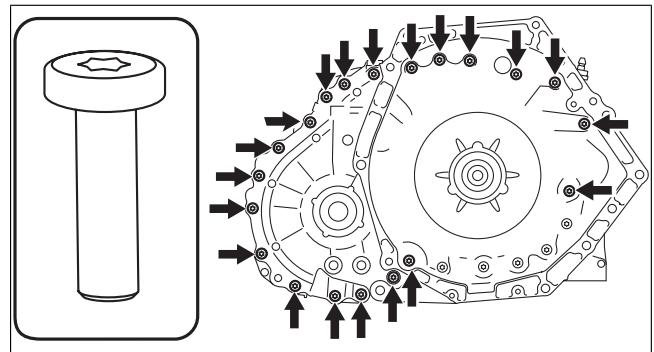


bgw3ja00000393

(5) Assemble and temporarily tighten the bolts to the positions shown in the figure.

Note

- Bolt size: M8×1.25 bolt, length approx. 28 mm {1.1 in}



bgw3ja00000394

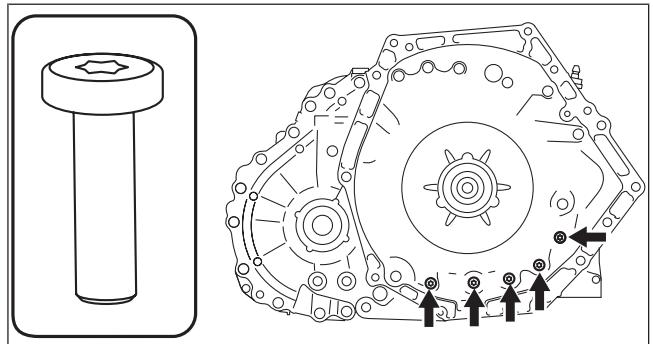
(6) Assemble and temporarily tighten the new bolts to the positions shown in the figure.

Caution

- The bolts for the assembly are coated with sealant. If the bolts are reused it could cause ATF leakage, therefore use new bolts.

Note

- Bolt size: M8×1.25 bolt, length approx. 28 mm {1.1 in} (with sealant applied)



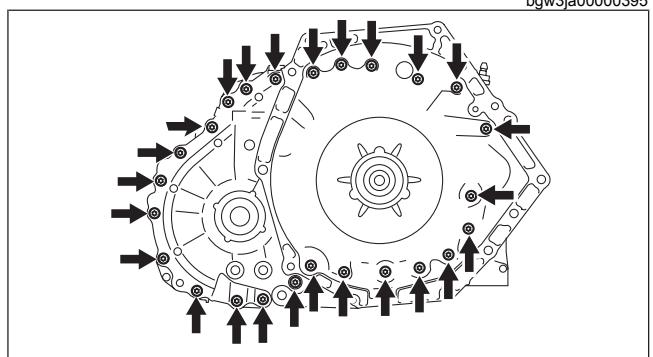
bgw3ja00000395

(7) Tighten the bolts shown in the figure.

Tightening torque

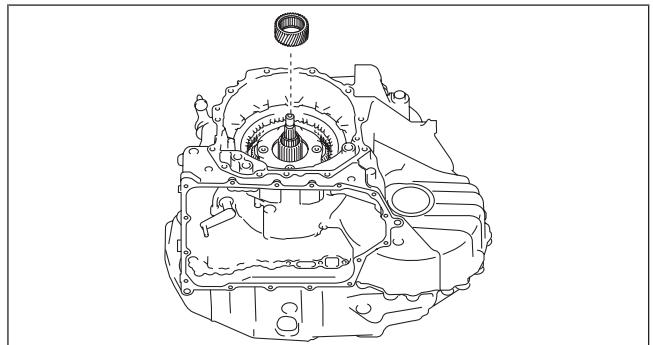
19—25 N·m {2.0—2.5 kgf·m, 15—18 ft·lbf}

1	O-ring (outer diameter approx. 15.6 mm {0.614 in}, thickness approx. 2.4 mm {0.094 in})
2	O-ring (outer diameter approx. 73.3 mm {2.89 in}, thickness approx. 3.0 mm {0.12 in})
3	Converter housing
4	25 bolts * (M8×1.25 bolt, length approx. 28 mm {1.1 in})

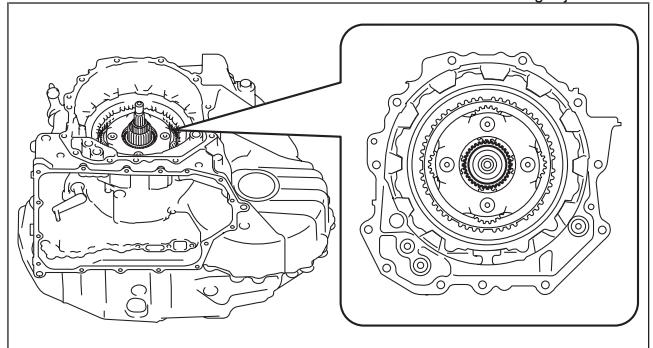


bgw3ja00000396

46. Assemble the front sun gear.

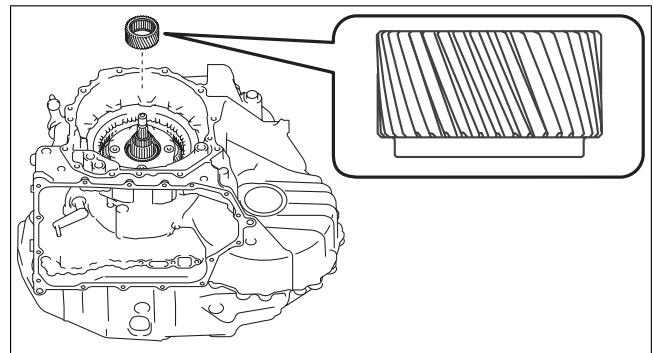


bgw3ja00000397

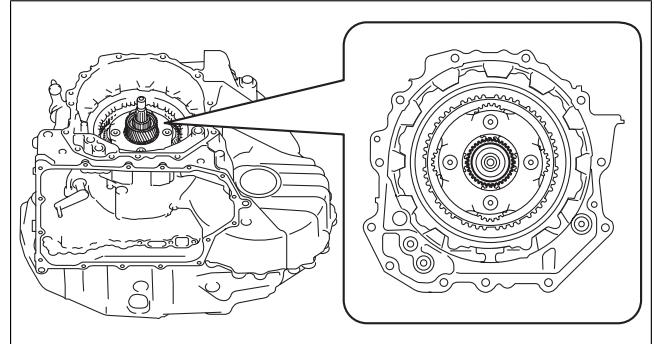


bgw3ja00000398

47. Assemble the rear sun gear.



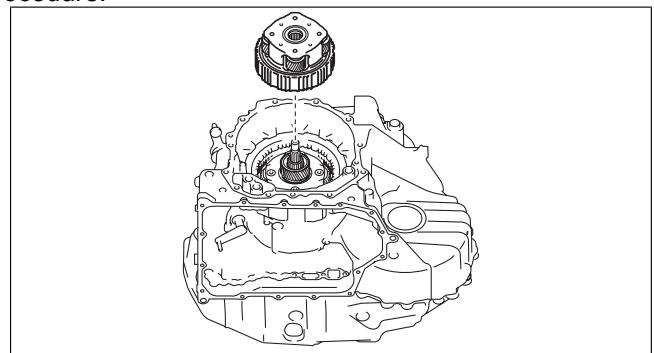
bgw3ja00000399



bgw3ja00000400

48. Assemble the rear planetary gear using the following procedure:

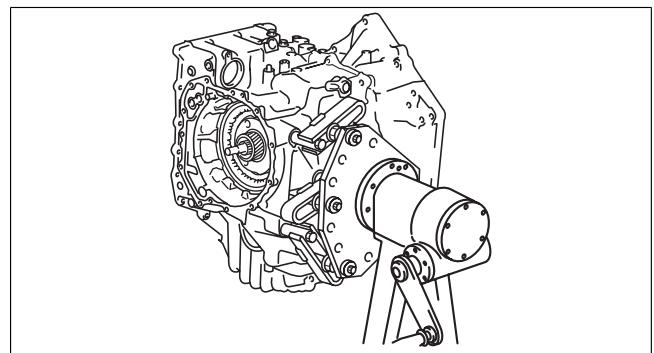
(1) Assemble the rear planetary gear.



bgw3ja00000401

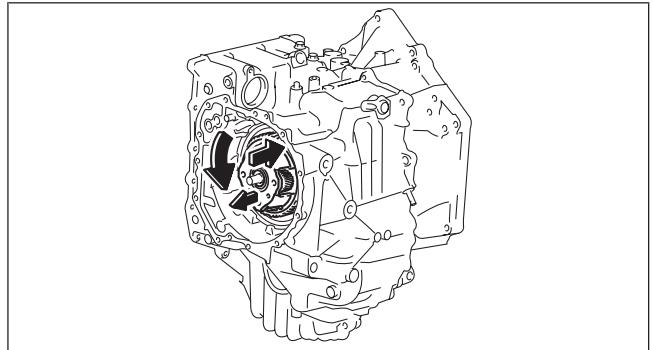
Note

- If the rear planetary gear assembly is difficult, assembly is easier if the work is performed using the following procedure:
 1. Rotate and adjust the rotation handle of the engine stand so that the end cover side is situated sideways.



bgw3ja00000402

2. While rotating the rear planetary gear, engage the splines of each drive plate of the low and reverse brake one by one, and assemble.



bgw3ja00000403

- (2) To verify that the rear planetary gear is securely assembled, measure the distance shown in the figure.

Note

- Recommended measuring instrument: Depth gauge, straight edge ruler

A : Transaxle case end (alignment surface with end cover)

B : Rear planetary gear end

Specification

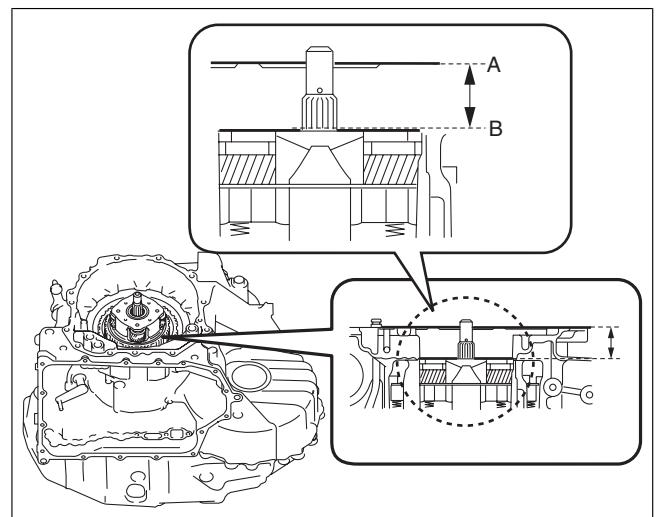
35.0—37.5 mm {1.38—1.47 in}

- If not within the specification, remove the rear planetary gear and reassemble.

Note

- Measurement method

- 1) Set two straight edge rulers along the alignment surface of the transaxle case with the end cover as shown in the figure.

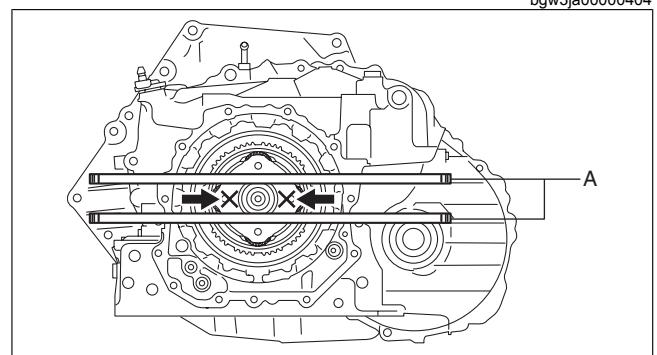


bgw3ja00000404

- 2) Measure the positions (2 locations) shown in the figure using a depth gauge and calculate the average value.

A : Straight edge ruler

- 3) Subtract the thickness of the straight edge ruler from the average value.

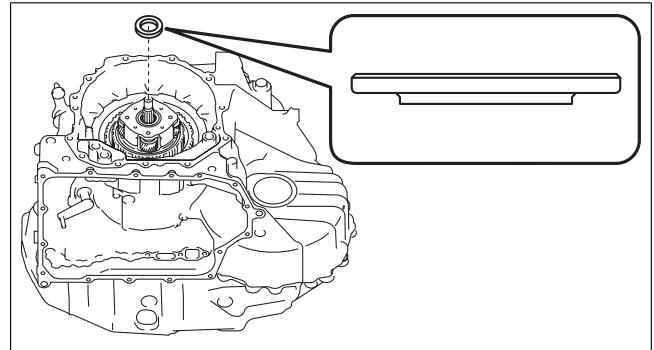


bgw3ja00000405

49. Assemble the thrust needle bearing.

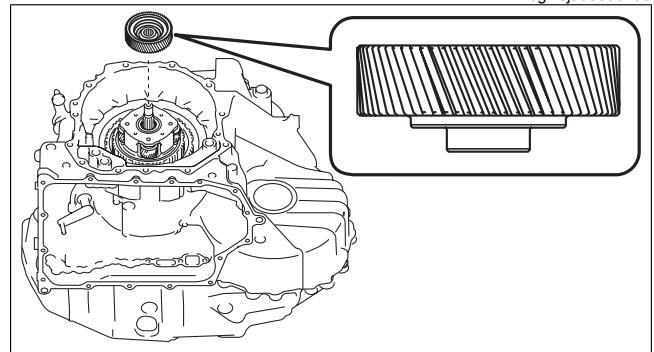
Note

- Thrust needle bearing size: Outer diameter approx. 44 mm {1.7 in}

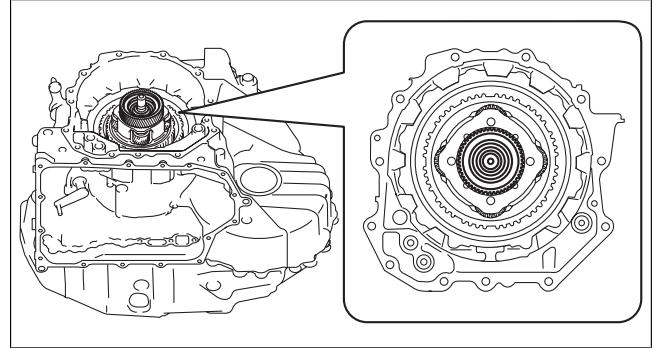


bgw3ja00000406

50. Assemble the reduction sun gear.



bgw3ja00000407

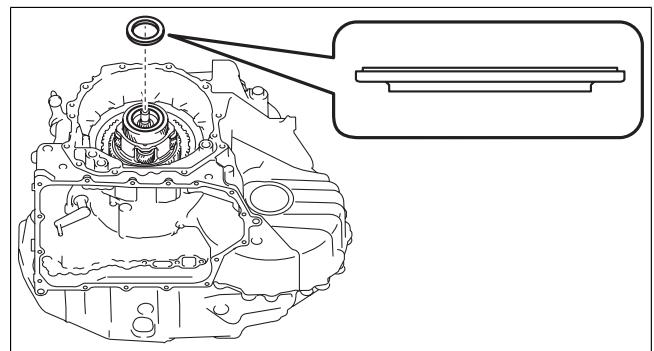


bgw3ja00000408

51. Assemble the thrust needle bearing.

Note

- Thrust needle bearing size: Outer diameter approx. 61.5 mm {2.42 in}



bgw3ja00000409

52. Assemble the shim using the following procedure:

Note

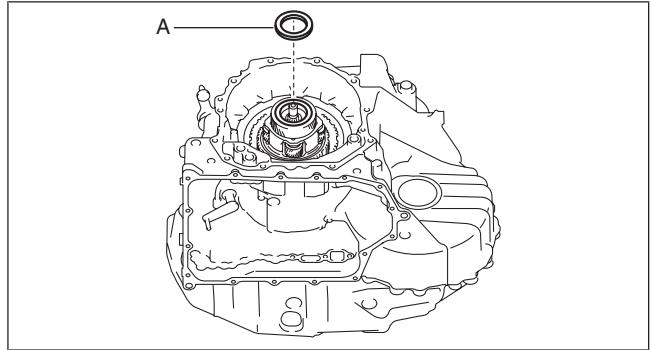
- Shim size: Outer diameter approx. 59.5 mm {2.34 in}

(1) Measure the total end play and select the appropriate shim. (See TOTAL END PLAY MEASUREMENT/ADJUSTMENT.)

Caution

- The total end play is the play (gap) in the axial direction of each planetary gear. If the total end play adjustment is not performed, it may cause damage to the thrust needle bearing between each planetary gear or other parts.

(2) Assemble the selected shim in Step (1).
A : Shim (selection)



bgw3ja00000410

53. Assemble the end cover component using the following procedure:

* : Of the 12 bolts, 2 are coated with sealant

(1) Assemble new O-rings using the following procedure:

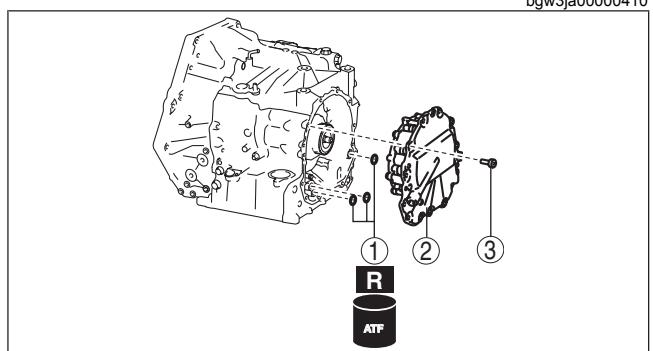
Caution

- If an O-ring is reused it could cause ATF leakage, therefore use a new O-ring.

Note

- O-ring size: Outer diameter approx. 15.6 mm {0.614 in}, thickness approx. 2.4 mm {0.094 in}

- 1) Apply ATF (ATF FZ) to the new O-rings.
- 2) Assemble the new O-rings.

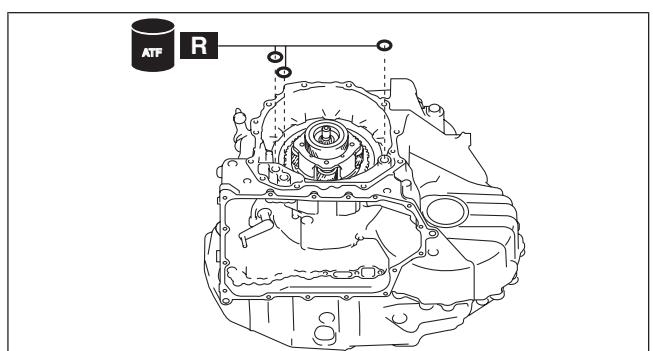


bgw3ja00000411

(2) Remove any remaining old sealant on the contact surfaces of the transaxle case and end cover, and degrease the contact surfaces.

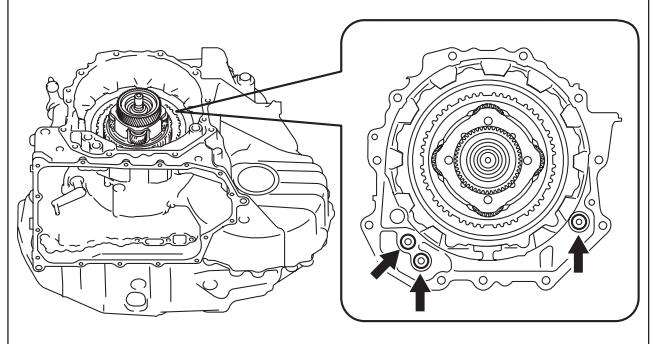
Caution

- When degreasing and if degreaser is used, use a rag saturated with degreaser and be careful not to allow degreaser to penetrate the interior of the transaxle.
In addition, after degreasing, visually verify that there is no foreign matter (such as old sealant, cloth fibers) which has penetrated the interior of the transaxle.



bgw3ja00000412

(3) Apply sealant (silicone sealant TB1217E) to the transaxle case.



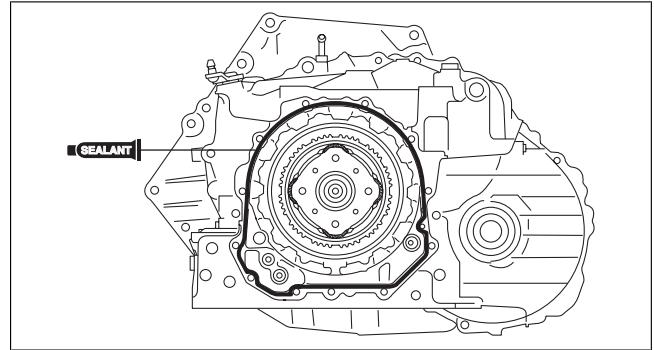
bgw3ja00000413

Caution

- If sealant is applied excessively or applied to a part other than the indicated part, the O-ring could deform and the sealant could penetrate the oil passage. Apply an appropriate amount of sealant to the indicated part.

Note

- Sealant application amount (bead thickness): $\phi 0.5\text{--}1.8\text{ mm}$ {0.02--0.07 in}

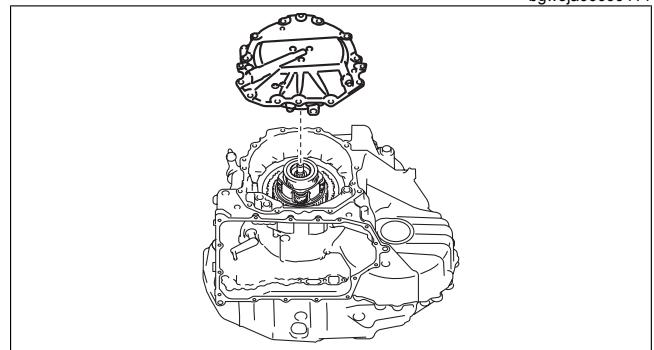


bgw3ja00000414

- (4) Assemble the end cover component before the applied sealant starts to harden.

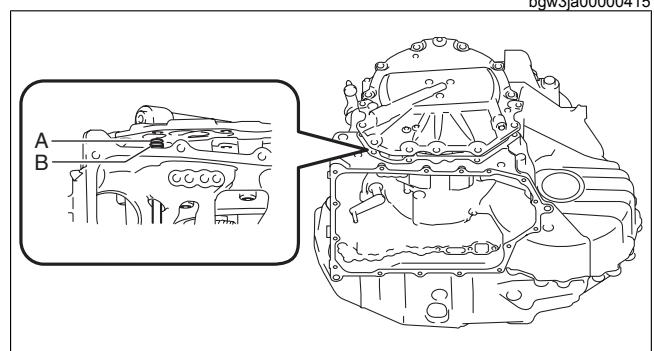
Note

- Adjust the oil pipe and assemble the end cover component so that the oil pipe is assembled to the end cover oil passage.



bgw3ja00000415

A : End cover oil passage
B : Oil pipe

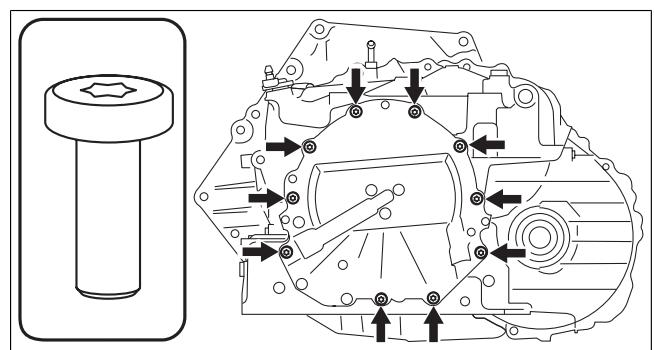


azzjw00000618

- (5) Assemble and temporarily tighten the bolts to the positions shown in the figure.

Note

- Bolt size: M8×1.25 bolt, length approx. 21 mm {0.83 in}



bgw3ja00000416

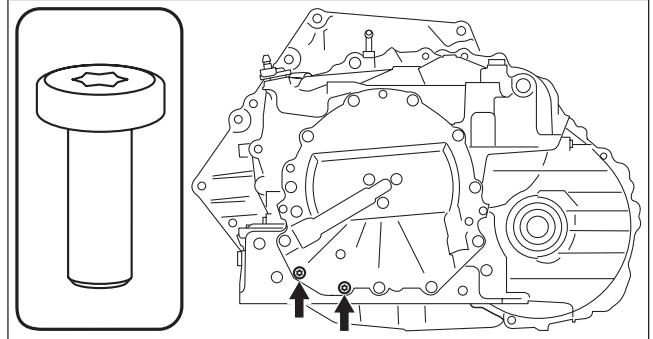
- (6) Assemble and temporarily tighten the new bolts to the positions shown in the figure.

Caution

- The bolts for the assembly are coated with sealant. If the bolts are reused it could cause ATF leakage, therefore use new bolts.

Note

- Bolt size: M8×1.25 bolt, length approx. 21 mm {0.83 in} (with sealant applied)

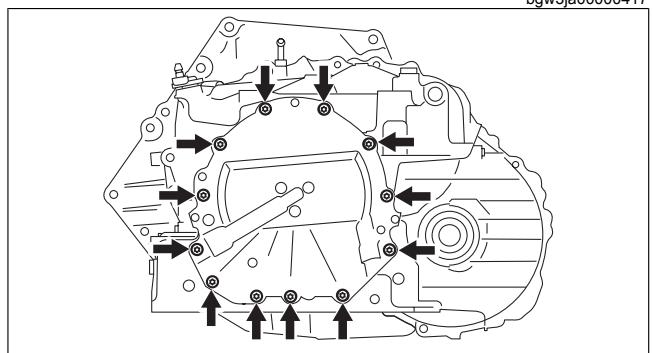


bgw3ja00000417

(7) Tighten the bolts shown in the figure.

Tightening torque
19—25 N·m {2.0—2.5 kgf·m, 15—18 ft·lbf}

1	O-ring (outer diameter approx. 15.6 mm {0.614 in}, thickness approx. 2.4 mm {0.094 in})
2	End cover component
3	12 bolts * (M8×1.25 bolt, length approx. 21 mm {0.83 in})



bgw3ja00000418

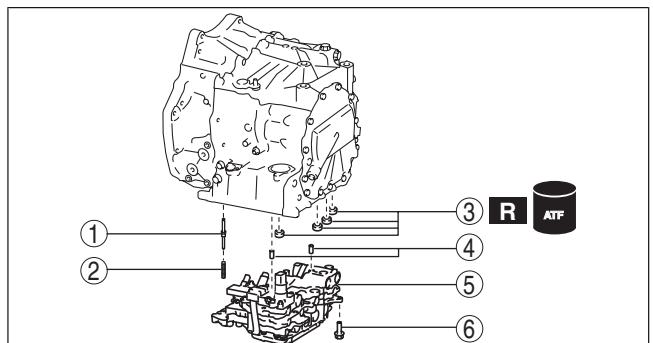
54. Assemble the control valve body using the following procedure:

Caution

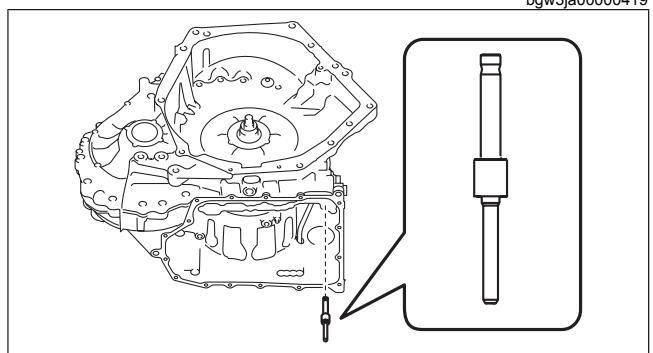
- Do not drop or apply an impact to the control valve body. Replace the control valve body with a new one if it was dropped or received an impact.

* : Only vehicles with oil cooler No.2

(1) Assemble the spool valve (only vehicles with oil cooler No.2).

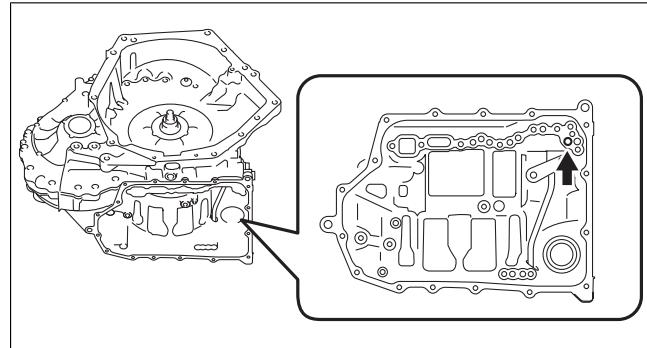


bgw3ja00000419

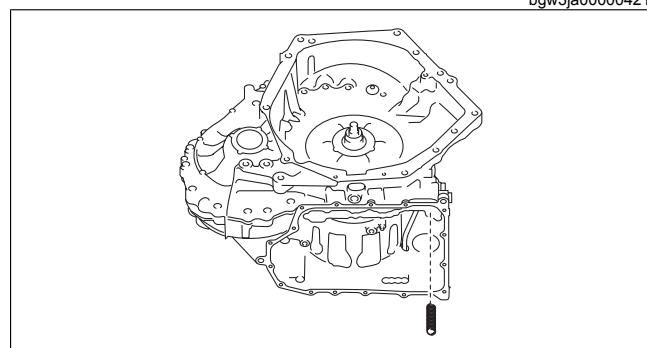


bgw3ja00000420

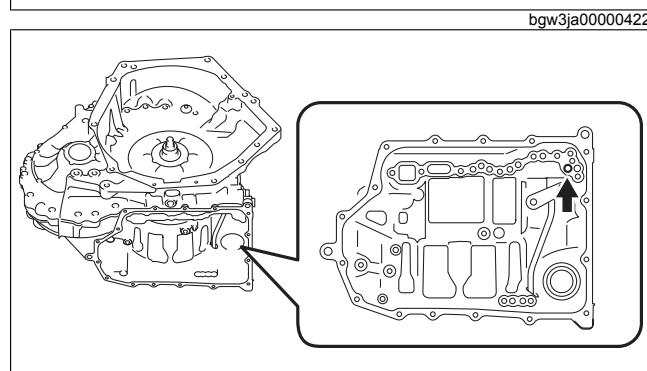
- (2) Assemble the spool valve spring (only vehicles with oil cooler No.2).



bgw3ja00000421



bgw3ja00000422



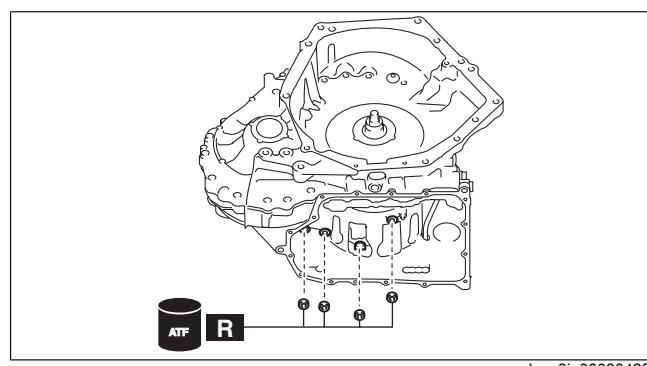
bgw3ja00000421

- (3) Assemble the new gaskets using the following procedure:

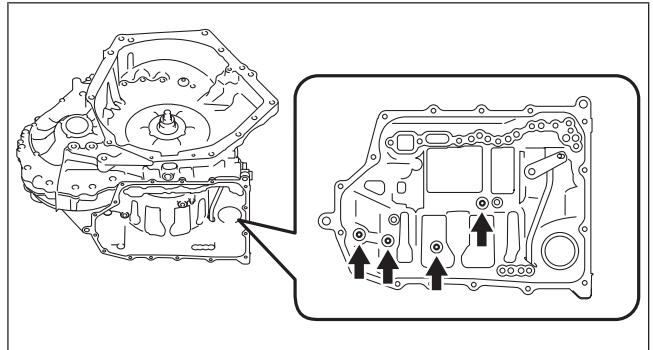
Caution

- If a gasket is reused it could cause ATF leakage, therefore use a new gasket.

- 1) Apply ATF (ATF FZ) to the new gaskets.
- 2) Assemble the new gaskets.



bgw3ja00000423

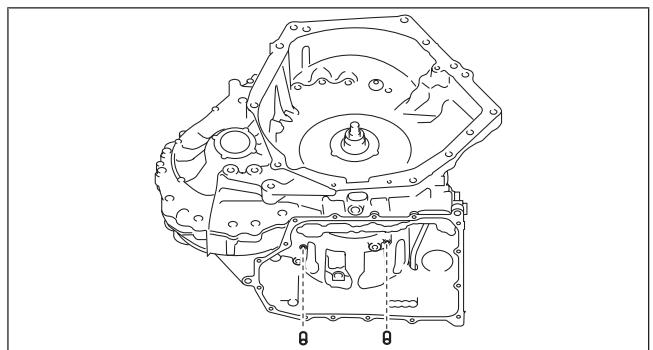


bgw3ja00000424

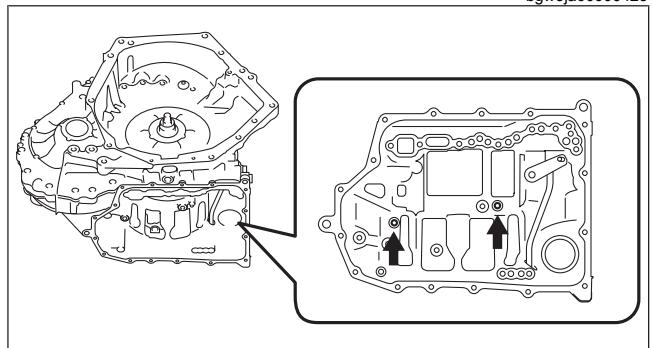
(4) Assemble the dowel pins.

Caution

- Do not assemble the dowel pins using a tool such as a hammer to prevent damaging the part. For the dowel pin assembly, only insert the dowel pins to the transaxle case assembly hole by hand.



bgw3ja00000425

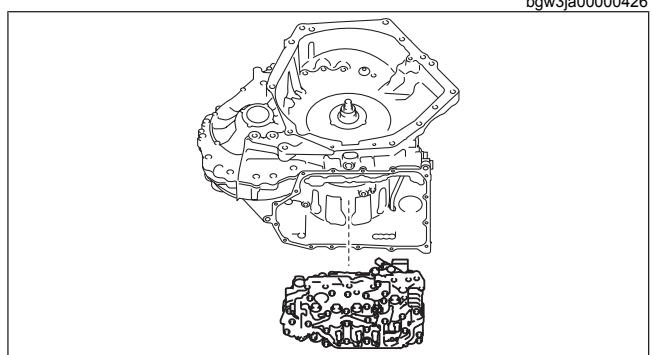


bgw3ja00000426

(5) Assemble the control valve body.

Caution

- Assemble the control valve body at a straight angle so that force is not applied to the control valve body connector in the lateral direction.
- Assemble the control valve body so that the TCM, turbine/input shaft speed sensor, and the output shaft speed sensor do not contact the transaxle case.



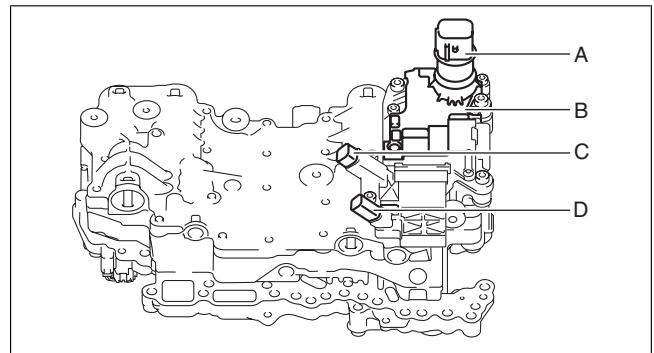
bgw3ja00000427

A : Control valve body connector
 B : TCM
 C : Output shaft speed sensor
 D : Turbine/input shaft speed sensor

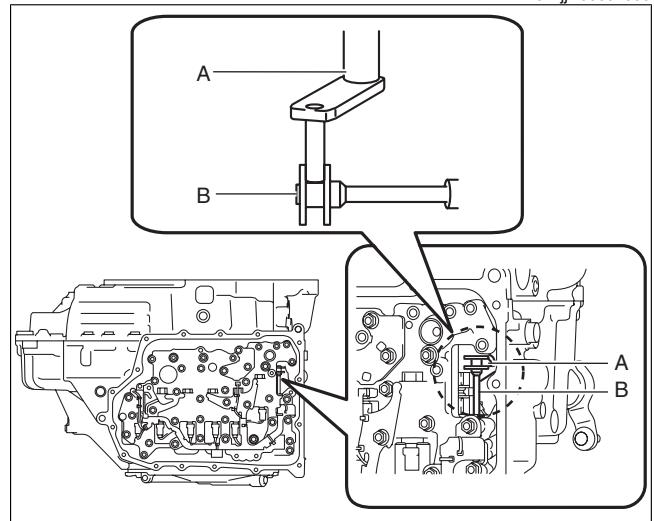
Caution

- Adjust the manual valve and assemble the control valve body so that the parking assist lever component end is engaged with the manual valve.

A : Parking assist lever component
 B : Manual valve



azzjw00001566



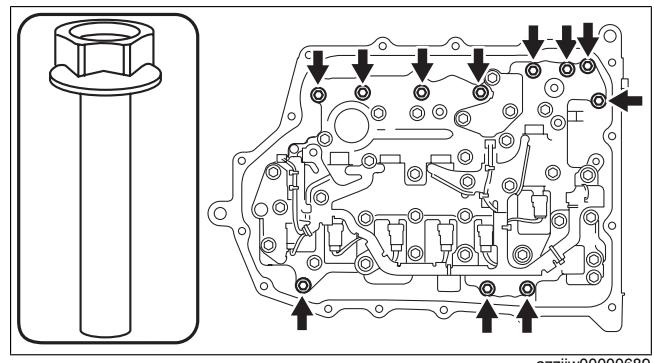
azzjw00000730

(6) Assemble and tighten the bolts shown in the figure.

Note

- Bolt size: M6×1.0 bolt, length approx. 30 mm {1.2 in}

Tightening torque
 9—10 N·m {92—101 kgf·cm, 80—88 in·lbf}



azzjw00000689

(7) Move the manual valve in the direction shown in the figure and verify that the manual valve is engaged with the parking assist lever component end.

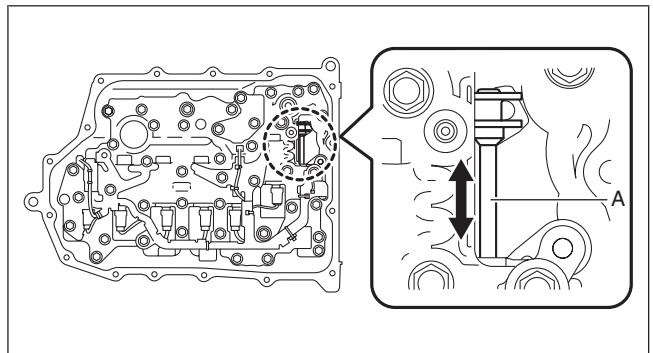
Note

- If the manual valve is only moved for excessive play on both surfaces of the parking assist lever component and the manual valve, the manual valve is correctly connected to the parking assist lever component.

A : Manual valve

- If there is a malfunction, remove the control valve body and reassemble.

1	Spool valve*
2	Spool valve spring*
3	Gasket
4	Dowel pin
5	Control valve body
6	11 bolts (M6×1.0 bolt, length approx. 30 mm {1.2 in})

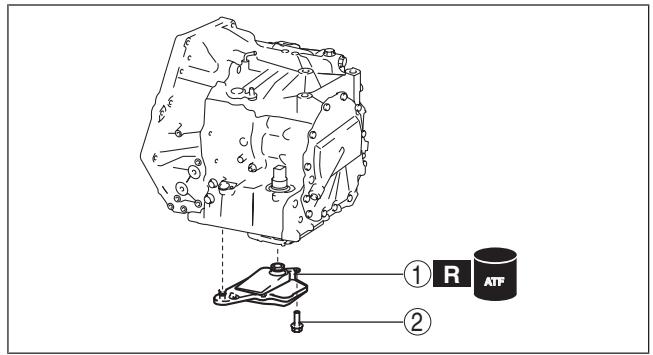


azjjw00001212

55. Assemble a new oil strainer using the following procedure:

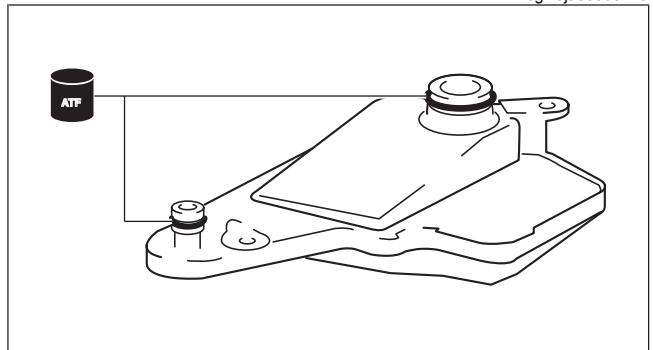
Caution

- If an oil strainer is reused while containing excessive foreign matter, it could cause an operation malfunction, therefore use a new oil strainer.



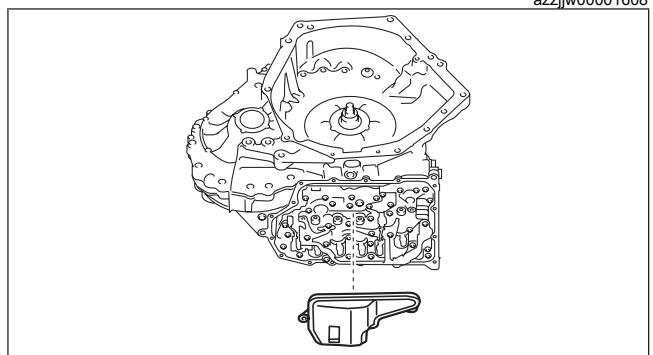
bgw3ja00000428

(1) Apply ATF (ATF FZ) to the new oil strainer O-rings.

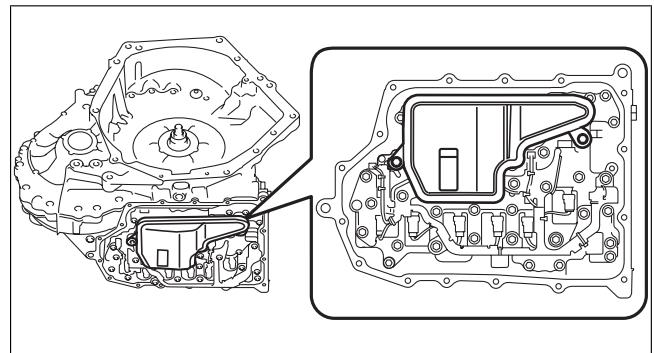


azjjw00001608

(2) Assemble the new oil strainer.



bgw3ja00000429



bgw3ja00000430

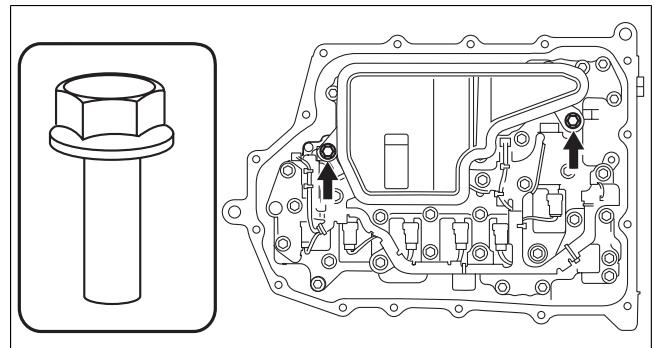
(3) Assemble and tighten the bolts shown in the figure.

Note

- Bolt size: M6×1.0 bolt, length approx. 16 mm {0.63 in}

Tightening torque

9—10 N·m {92—101 kgf·cm, 80—88 in·lbf}



azzjjw00000694

56. Assemble the oil pan and magnet using the following procedure:

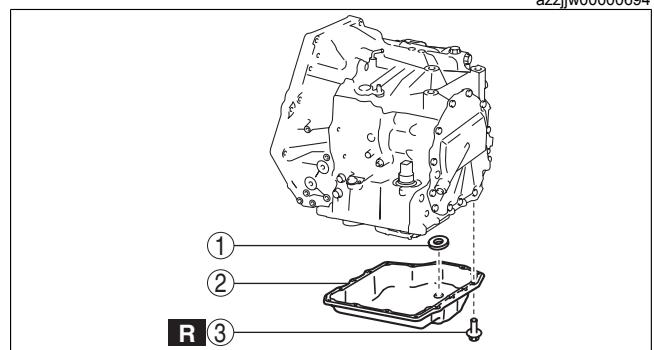
* : Length without spring washer is indicated due to bolt with spring washer. Length with spring washer is approx. 13 mm {0.51 in}.

- (1) Assemble the magnet.
- (2) Remove any remaining old sealant on the contact surfaces of the transaxle case and oil pan, and degrease the contact surfaces.

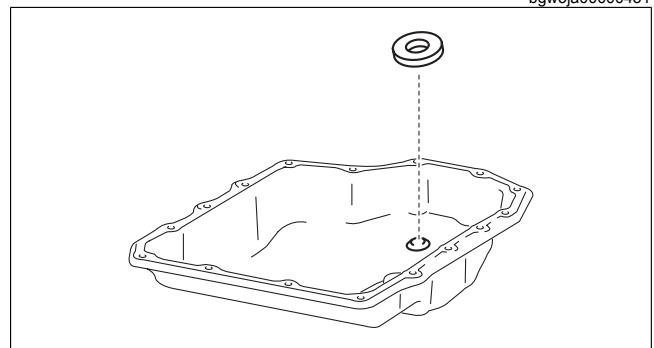
Caution

- When degreasing and if degreaser is used, use a rag saturated with degreaser and be careful not to allow degreaser to penetrate the interior of the transaxle.

In addition, after degreasing, visually verify that there is no foreign matter (such as old sealant, cloth fibers) which has penetrated the interior of the transaxle.



bgw3ja00000431



azzjjw00000696

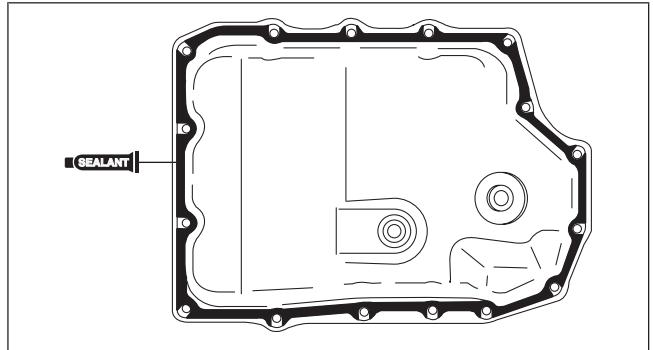
(3) Apply sealant (silicone sealant TB1217E) to the oil pan.

Caution

- If sealant is applied excessively or applied to a part other than the indicated part, the sealant could penetrate the transaxle inside. Apply an appropriate amount of sealant to the indicated part.

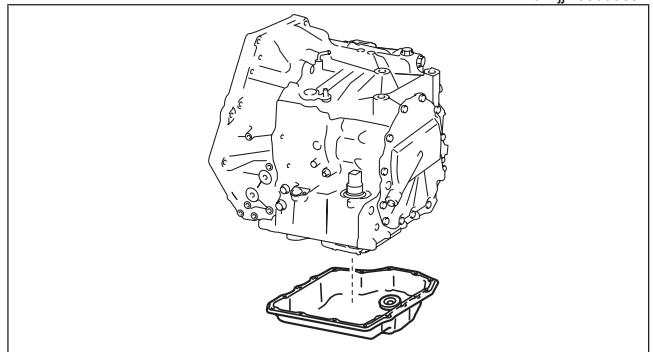
Note

- Sealant application amount (bead thickness): $\phi 1.9$ — 6.7 mm {0.08—0.26 in}



azjjw00000697

- (4) Assemble the oil pan before the applied sealant starts to harden.



bgw3ja00000432

- (5) Assemble and tighten the new bolts to the positions shown in the figure.

Caution

- The bolts for assembling are used for bolts with spring washer. If the bolts with spring washer are reused it could loosen the bolts due to spring weakness, therefore use new bolts.

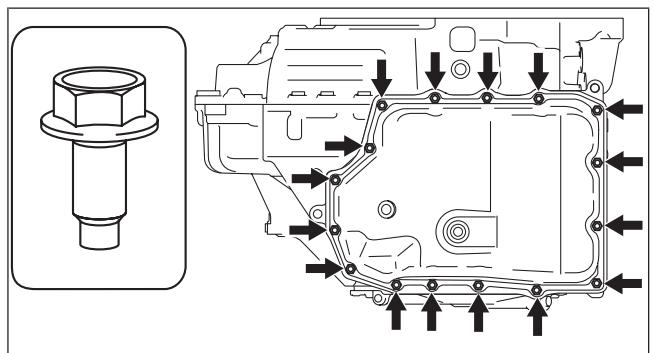
Note

- Bolt size: M6×1.0 bolt, length approx. 15 mm {0.59 in}*

* : Length without spring washer is indicated due to bolt with spring washer. Length with spring washer is approx. 13 mm {0.51 in}.

Tightening torque
8—10 N·m {82—101 kgf·cm, 71—88 in·lbf}

1	Magnet
2	Oil pan
3	16 bolts (M6×1.0 bolt, length approx. 15 mm {0.59 in} *)



azjjw00000699

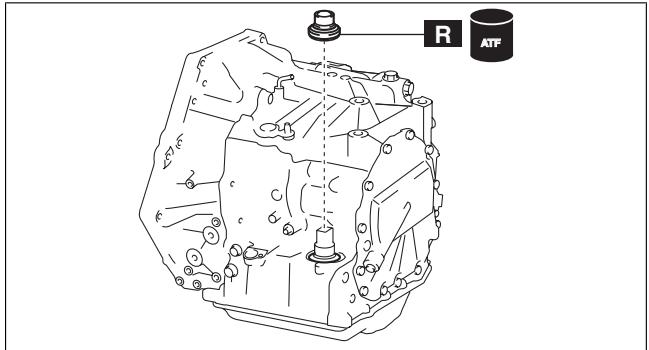
57. Assemble a new oil seal using the following procedure:

Caution

- If an oil seal is reused it could cause ATF leakage, therefore use a new oil seal.

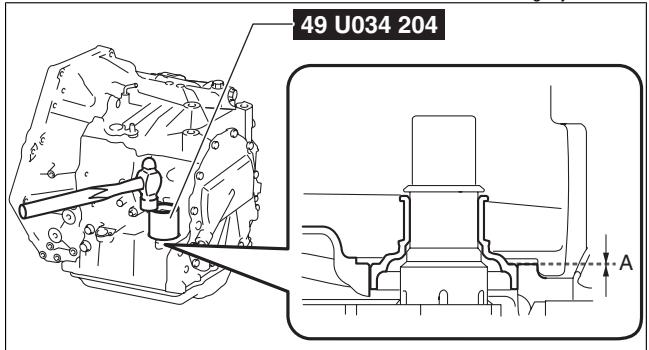
- (1) Apply ATF (ATF FZ) to the engagement area of the new oil seal and transaxle case.
(2) Apply ATF (ATF FZ) to the engagement area of the new oil seal and connector.

- (3) Assemble the new oil seal to the position shown in the figure using the SST.



bgw3ja00000433

A : -0.5—1.5 mm {-0.01—0.05 in}



bgw3ja00000434

58. Remove the SSTs from the transaxle using the following procedure:

Caution

- When removing the transaxle from the SST (engine stand) using chain hoists, be careful not to allow the transaxle to contact the SST (engine stand). If the transaxle contacts the SST, verify the areas which are contacted and replace damaged parts with new ones.

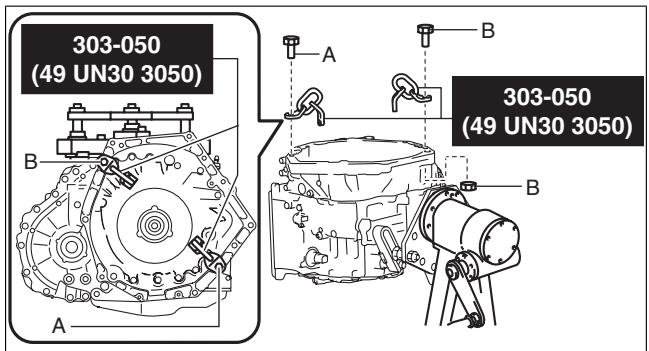
- (1) Assemble the SSTs using part number: 9YA02 1015, or M10×1.5 bolt, length 35 mm {1.4 in}, and M10 bolt, nut.

A : Part number: 9YA02 1015, or M10×1.5 bolt, length 35 mm {1.4 in}

B : M10 bolt, nut

Tightening torque

38—52 N·m {3.9—5.3 kgf·m, 29—38 ft·lbf}



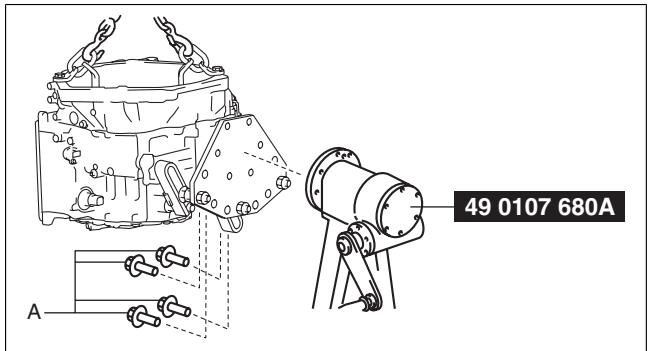
bgw3ja00000435

- (2) Using chain hoists, remove the transaxle from the SST (engine stand).

Caution

- When removing the transaxle from the SST (engine stand) using chain hoists, be careful not to allow the transaxle to contact the SST (engine stand). If the transaxle contacts the SST, verify the areas which are contacted and replace damaged parts with new ones.

A : Part number: 9YA02 A220, or M12×1.75 bolt, length 40 mm {1.6 in}



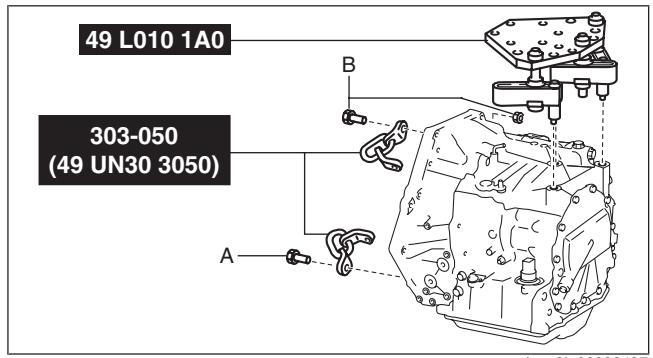
bgw3ja00000436

(3) Remove the SST.

A : Part number: 9YA02 1015, or M10×1.5 bolt, length

35 mm {1.4 in}

B : M10 bolt, nut

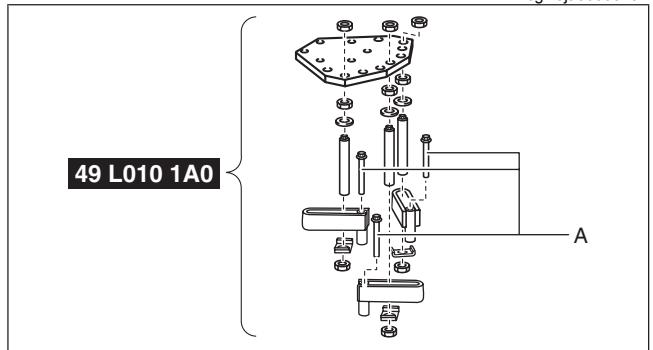


bgw3ja00000437

(4) Disassemble the SST.

A : Part number: 9YA02 1440, or M14×1.5 bolt, length

100 mm {3.94 in}



bgw3ja00000438

59. Assemble a new hose clamp using the following procedure:

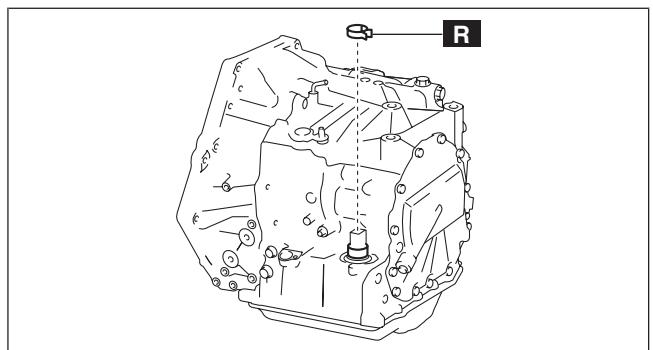
Caution

- If a hose clamp is reused it could cause ATF leakage, therefore use a new hose clamp.

(1) Assemble the new hose clamp to the position shown in the figure.

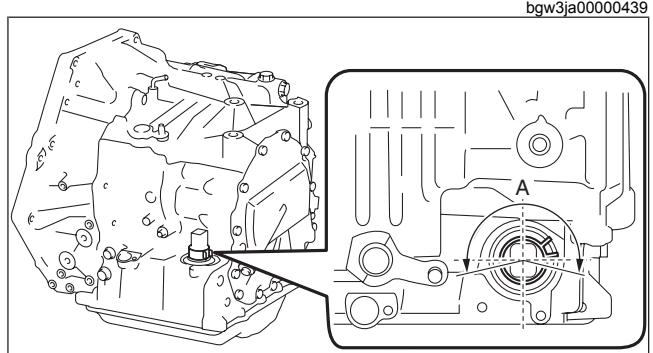
Caution

- Assemble the hose clamp tab to within the range shown in the figure.



bgw3ja00000439

A : 210°



bgw3ja00000440

(2) Verify that the hose clamp is assembled to within the position shown in the figure.

Caution

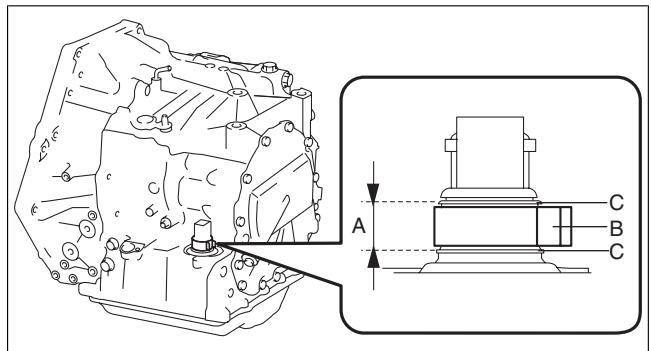
- Verify that the hose clamp does not contact the oil seal flange.

A : Hose clamp assembly area

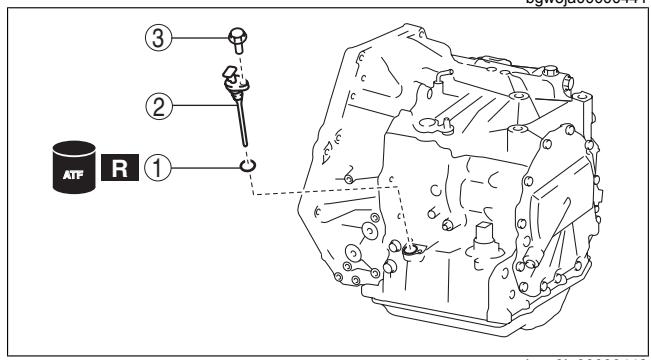
B : Hose clamp

C : Oil seal flange

- If not within the area, adjust so that the hose clamp assembly position is within the area.



60. Assemble the dipstick using the following procedure:



(1) Assemble a new O-ring using the following procedure:

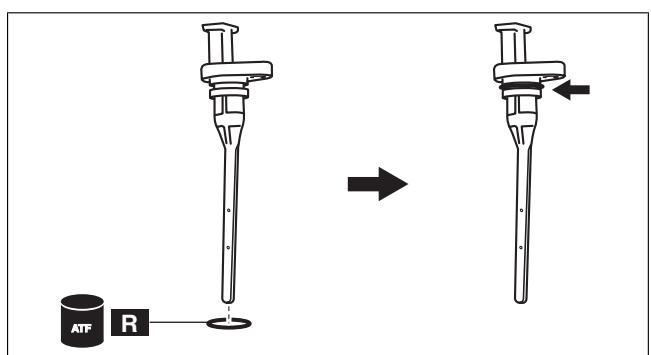
Caution

- If an O-ring is reused it could cause ATF leakage, therefore use a new O-ring.

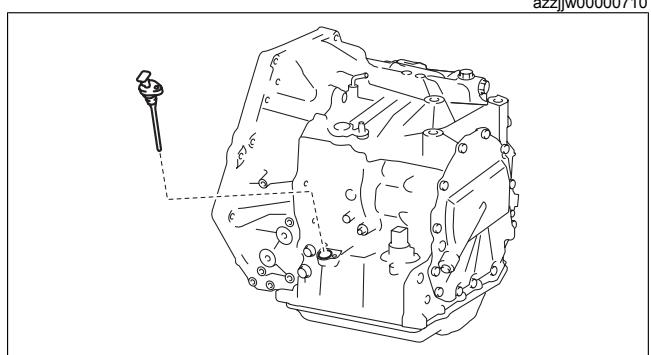
Note

- O-ring size: Outer diameter approx. 16.6 mm {0.654 in}, thickness approx. 2.4 mm {0.094 in}

- 1) Apply ATF (ATF FZ) to the new O-ring.
- 2) Assemble the new O-ring.



(2) Assemble the dipstick.



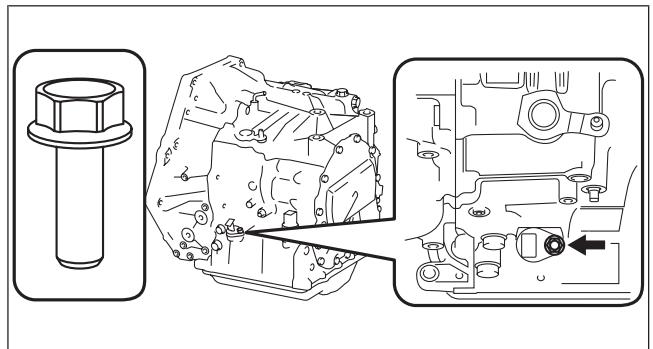
(3) Assemble and tighten the bolt shown in the figure.

Note

- Bolt size: M6×1.0 bolt, length approx. 16 mm {0.63 in}

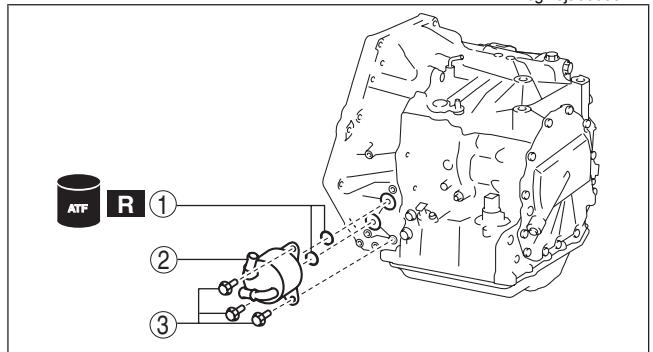
Tightening torque
8—11 N·m {82—112 kgf·cm, 71—97 in·lbf}

1	O-ring (outer diameter approx. 16.6 mm {0.654 in}, thickness approx. 2.4 mm {0.094 in})
2	Dipstick
3	Bolt (M6×1.0 bolt, length approx. 16 mm {0.63 in})



bgw3ja00000444

61. Assemble the oil cooler using the following procedure:



bgw3ja00000445

(1) Assemble new O-rings using the following procedure:

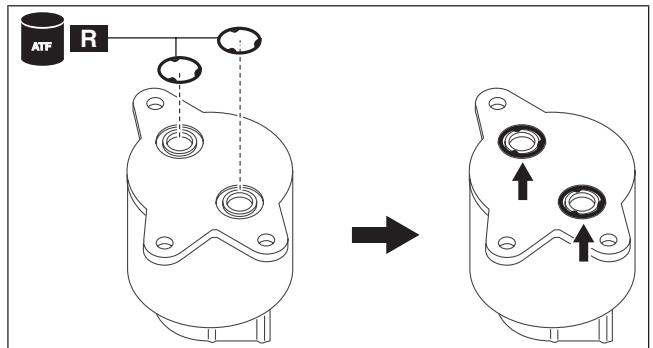
Caution

- If an O-ring is reused it could cause ATF leakage, therefore use a new O-ring.

Note

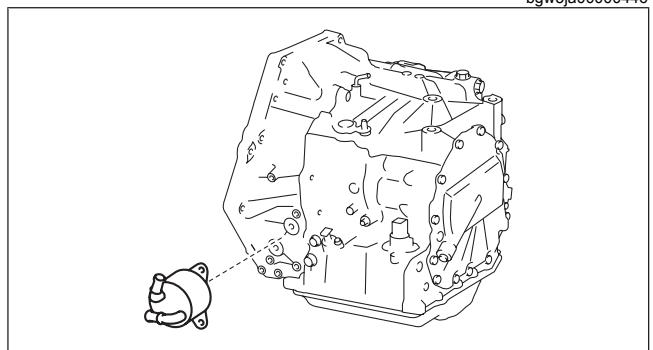
- O-ring size: Outer diameter approx. 24.4 mm {0.961 in}, thickness approx. 2.4 mm {0.094 in}

- 1) Apply ATF (ATF FZ) to the new O-rings.
- 2) Assemble the new O-rings.



bgw3ja00000446

(2) Assemble the oil cooler.



bgw3ja00000447

(3) Assemble and tighten the bolts shown in the figure.

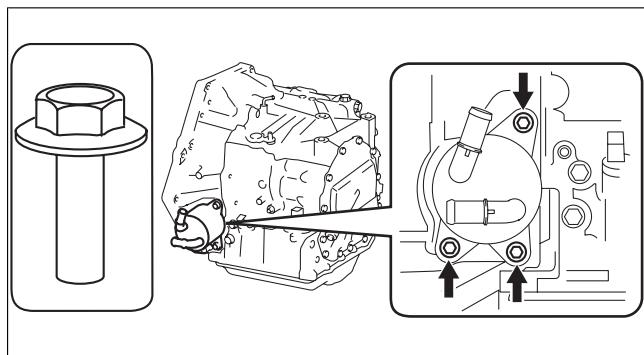
Note

- Bolt size: M8×1.25 bolt, length approx. 23.5 mm {0.925 in}

Tightening torque

22—27 N·m {2.3—2.7 kgf·m, 17—19 ft·lbf}

1	O-ring (outer diameter approx. 24.4 mm {0.961 in}, thickness approx. 2.4 mm {0.094 in})
2	Oil cooler
3	3 bolts (M8×1.25 bolt, length approx. 23.5 mm {0.925 in})



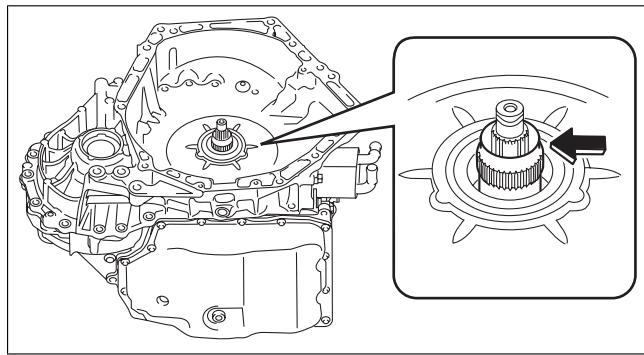
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62. Assemble the torque converter using the following procedure:

- (1) Apply ATF (ATF FZ) to the stator shaft end of the oil pump shown in the figure.

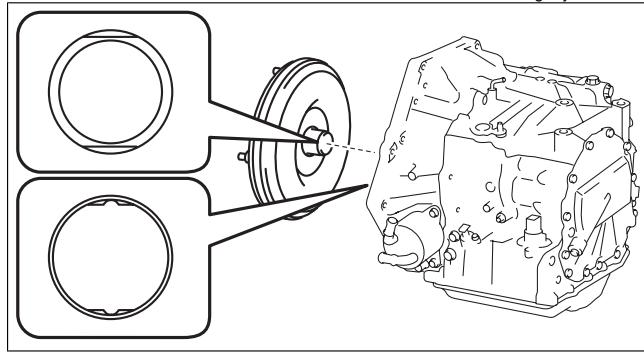
Caution

- Accurately perform the procedure to protect the internal parts of the torque converter.



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- (2) Assemble the torque converter so that the two surfaces of the notch on the end of the torque converter engage the inner rotor of the oil pump.



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- (3) To verify that the torque converter is securely assembled, measure the distance shown in the figure.

Note

- Recommended measuring instrument: Depth gauge, straight edge ruler

A : Converter housing end (alignment surface with engine)

B : Torque converter stud bolt seat

Specification

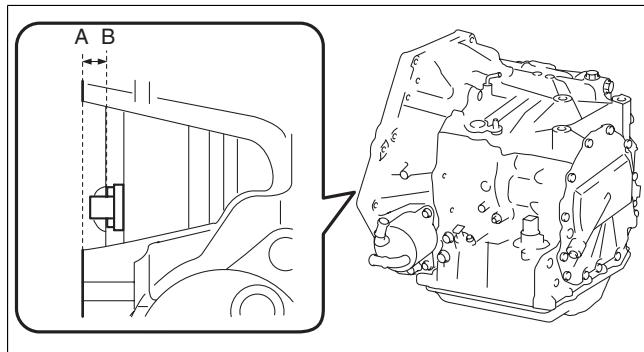
14.2 mm {0.560 in} or more

- If not within the specification, remove the torque converter and reassemble.

Note

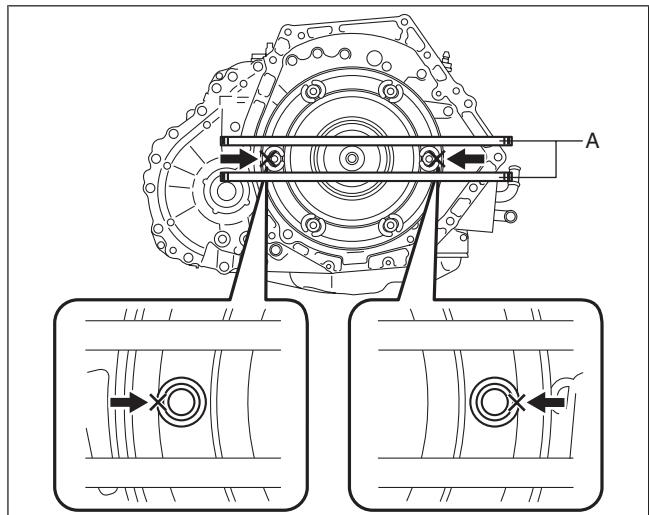
- Measurement method

- 1) Set two straight edge rulers along the alignment surface of the converter housing with the engine as shown in the figure.



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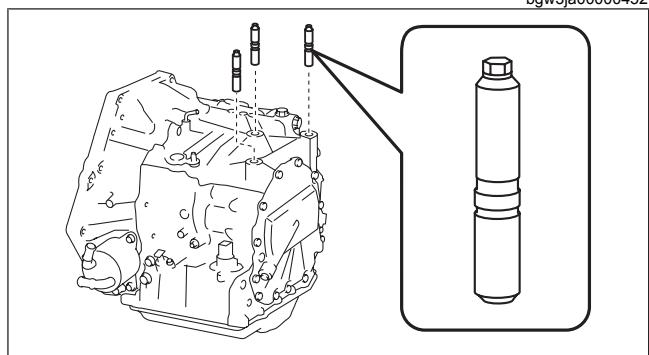
- 2) Measure the positions (2 locations) shown in the figure using a depth gauge and calculate the average value.
A : Straight edge ruler
3) Subtract the thickness of the straight edge ruler from the average value.



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63. Assemble and tighten the stud bolts.

Tightening torque
15—25 N·m {1.6—2.5 kgf·m, 12—18 ft·lbf}

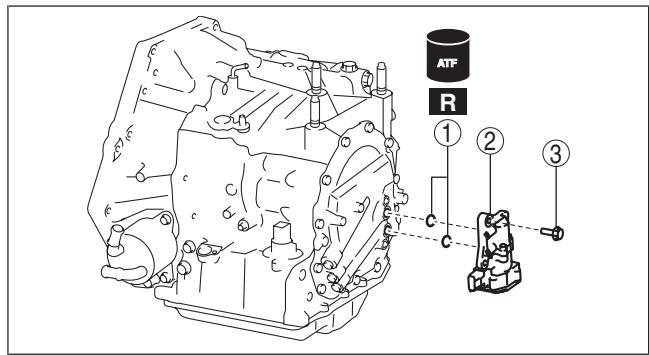


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64. Assemble the electric AT oil pump using the following procedure (only vehicles with i-stop):

Caution

- Do not drop or apply an impact to the electric AT oil pump. Replace the electric AT oil pump with a new one if it was dropped or received an impact.
- Do not disassemble the electric AT oil pump. Replace the electric AT oil pump if it has been disassembled.
- To prevent a malfunction, be careful not to allow sealant or foreign matter to penetrate the electric AT oil pump and the interior of the transaxle.
- Be careful not to scratch or damage the aligning surfaces of the electric AT oil pump and end cover and the O-ring assembly area so as not to cause ATF leakage.



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- (1) Assemble new O-rings using the following procedure:

Caution

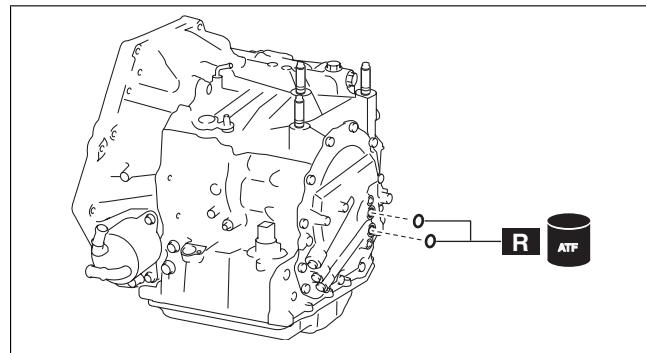
- If an O-ring is reused it could cause ATF leakage, therefore use a new O-ring.

Note

- O-ring size: Outer diameter approx. 15.6 mm {0.614 in}, thickness approx. 2.4 mm {0.094 in}

- 1) Apply ATF (ATF FZ) to the new O-rings.

2) Assemble the new O-rings.

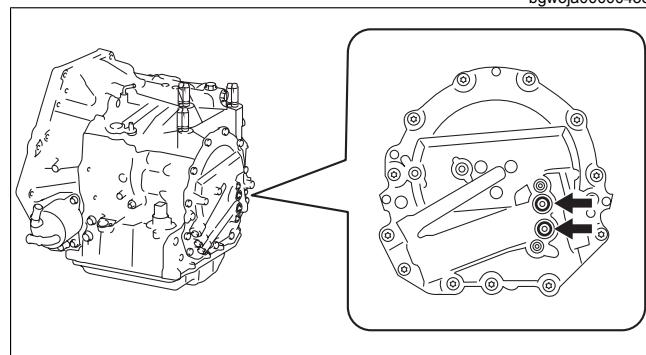


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(2) Remove any remaining old sealant on the contact surfaces of the end cover and electric AT oil pump, and clean degrease the contact surfaces.

Caution

- When degreasing and if degreaser is used, use a rag saturated with degreaser and be careful not to allow degreaser to penetrate the oil passage.
In addition, after degreasing, visually verify that there is no foreign matter (such as old sealant, cloth fibers) which has penetrated the oil passage.



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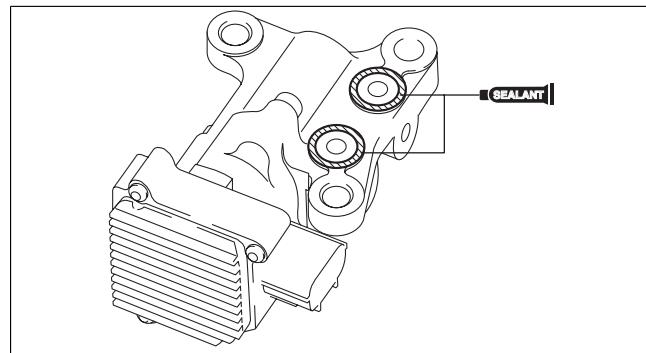
(3) Apply sealant (silicone sealant TB1217E) to the electric AT oil pump.

Caution

- If sealant is applied excessively or applied to a part other than the indicated part, the O-ring could deform and the sealant could penetrate the oil passage. Apply an appropriate amount of sealant to the indicated part.

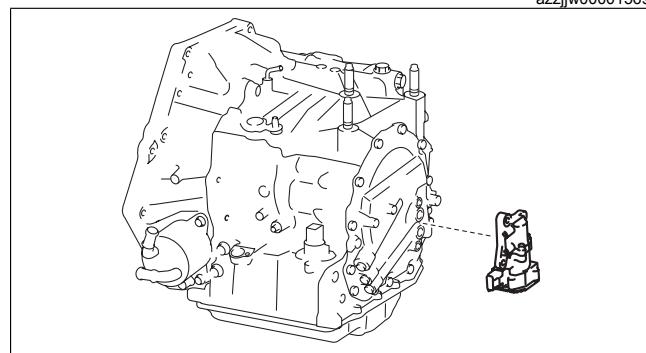
Note

- Sealant application amount (bead thickness): $\phi 0.5\text{--}1.5\text{ mm}$ {0.02--0.05 in}



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(4) Assemble the electric AT oil pump before the applied sealant starts to harden.



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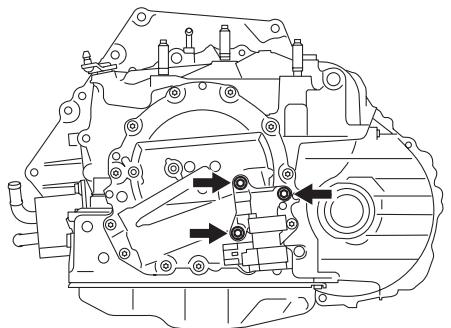
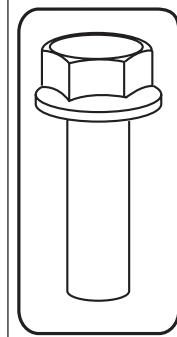
(5) Assemble and tighten the bolts shown in the figure.

Note

- Bolt size: M8×1.25 bolt, length approx. 25 mm {0.98 in}

Tightening torque
19—25 N·m {2.0—2.5 kgf·m, 15—18 ft·lbf}

1	O-ring (outer diameter approx. 15.6 mm {0.614 in}, thickness approx. 2.4 mm {0.094 in})
2	Electric AT oil pump
3	3 bolts (M8×1.25 bolt, length approx. 25 mm {0.98 in})



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