

OIL SEAL (OIL PUMP) REPLACEMENT

id051700660400

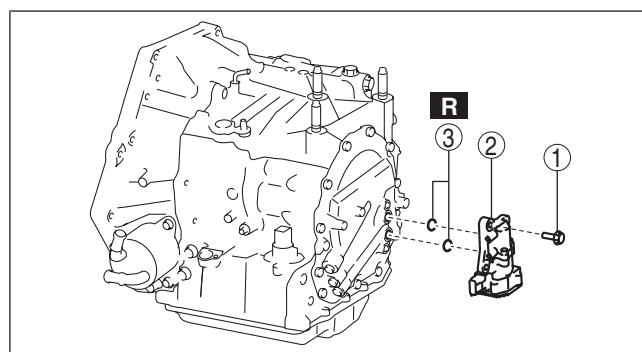
Note

- Perform the following servicing only if the oil seal is replaced due to ATF leakage from the oil seal (oil pump).

- Clean the outside of the transaxle. (See AUTOMATIC TRANSAXLE CLEANING.)
- Remove the electric AT oil pump using the following procedure (only vehicles with i-stop).

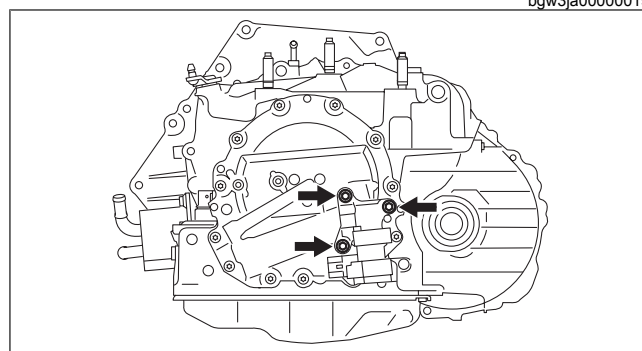
Caution

- 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) Remove the bolts shown in the figure.

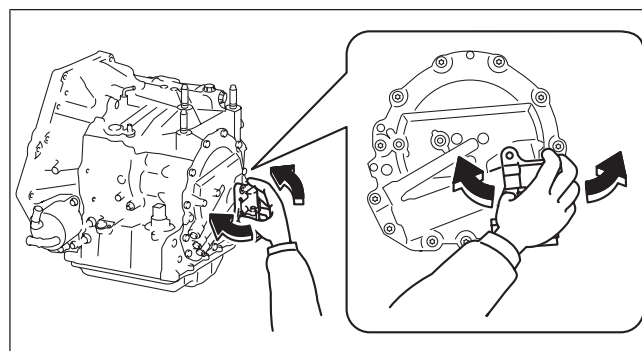


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- (2) Remove the electric AT oil pump.

Note

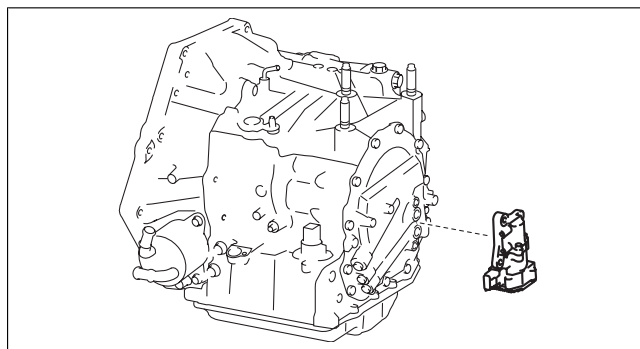
- Shake the electric AT oil pump by hand as shown in the figure and remove it.



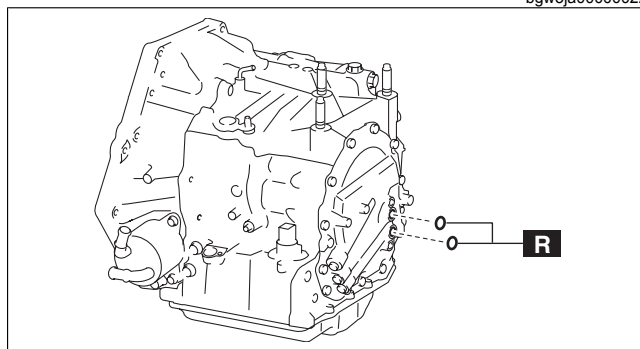
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(3) Remove the O-rings.

1	3 bolts
2	Electric AT oil pump
3	O-ring

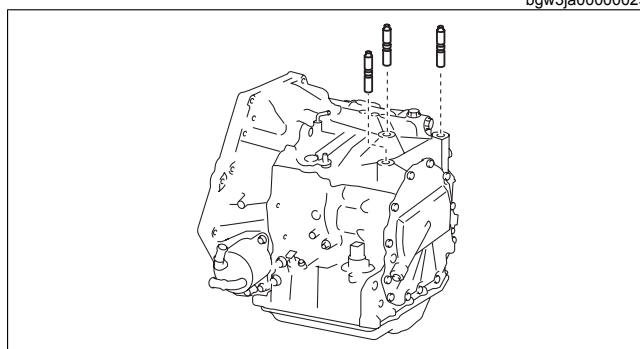


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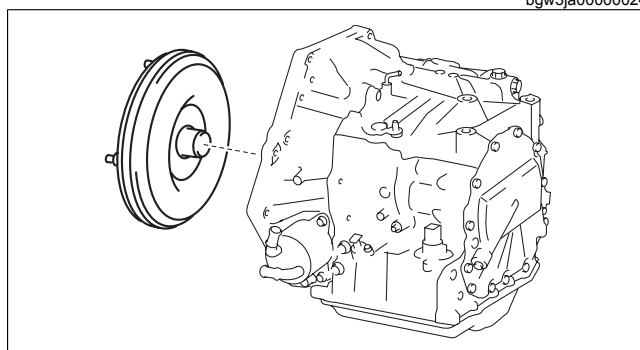
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3. Remove the stud bolts.



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4. Remove the torque converter.



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

Caution

- When installing the transaxle to the SST (engine stand) using chain hoists, be careful not to allow the transaxle (oil cooler in particular) 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) Install the SSTs to the transaxle using the following procedure.

Note

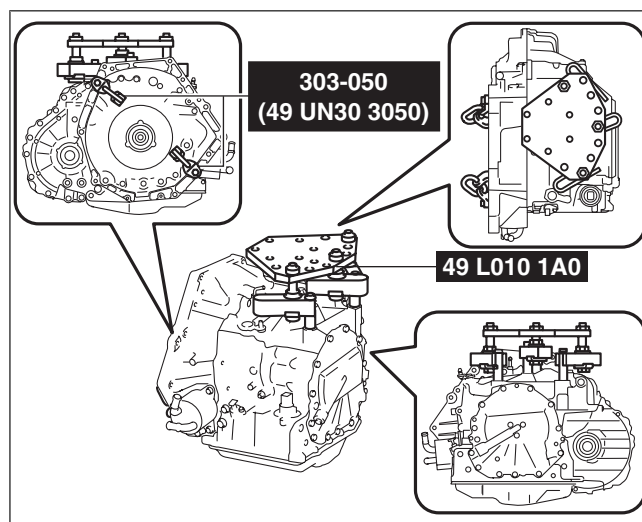
- When installing the SST (49 L010 1A0) to the transaxle (stud bolt holes), use part number: 9YA02 1440, or M14×1.5 bolts, length 100 mm {3.94 in}.
- When installing the SSTs (49 UN30 3050) to the transaxle, use part number: 9YA02 1015, or M10×1.5 bolt, length 35 mm {1.4 in} and M10 bolt, nut.

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

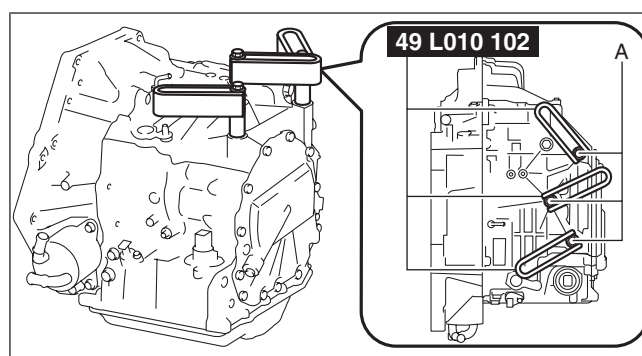
Note

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

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



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

Note

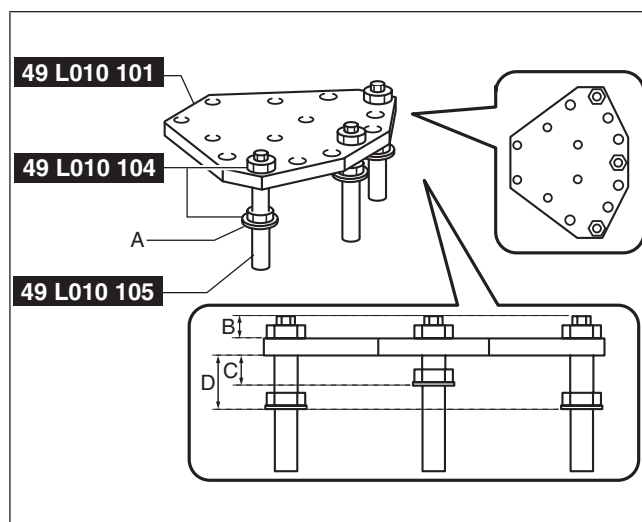
- Use bolts (49 L010 105) with a length of 138 mm {5.43 in}.

A : Washer

B : Approx. 20 mm {0.79 in}

C : Approx. 26 mm {1.0 in}

D : Approx. 47 mm {1.9 in}



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- 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.

Caution

- If something other than the SST arms (49 L010 102) installation area contacts the transaxle, 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}

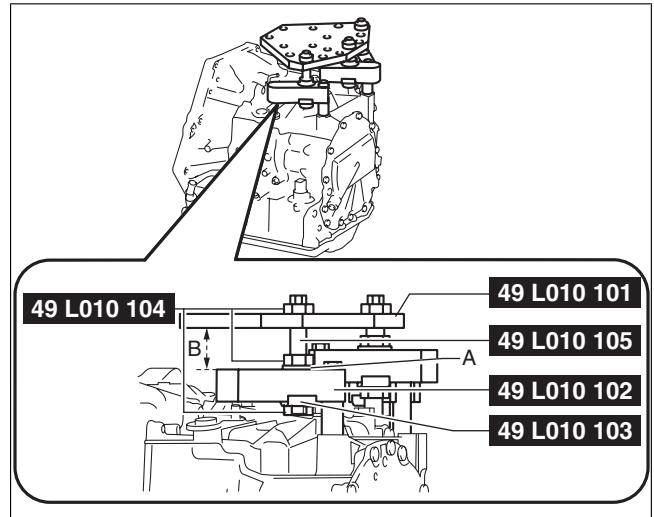
- 6) Assemble the SSTs using part number: 9YA02 1015, or M10×1.5 bolt, length 35 mm {1.4 in}, and M10 bolt, nut.

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

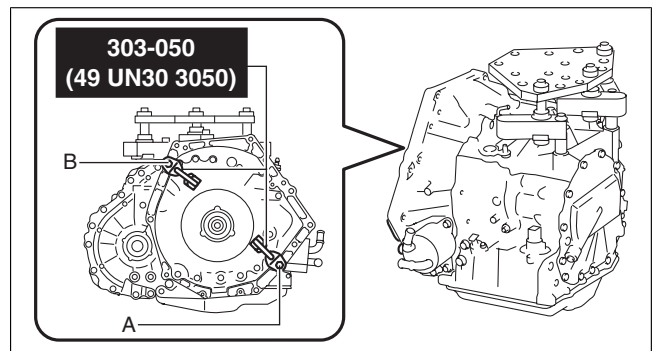
B : M10 bolt, nut

Tightening torque

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



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- (2) Using chain hoists, install the transaxle to the SST (engine stand) using part number: 9YA02 A220, or M12×1.75 bolts, length 40 mm {1.6 in}.

Caution

- When installing the transaxle to the SST (engine stand) using chain hoists, be careful not to allow the transaxle (oil cooler in particular) 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.

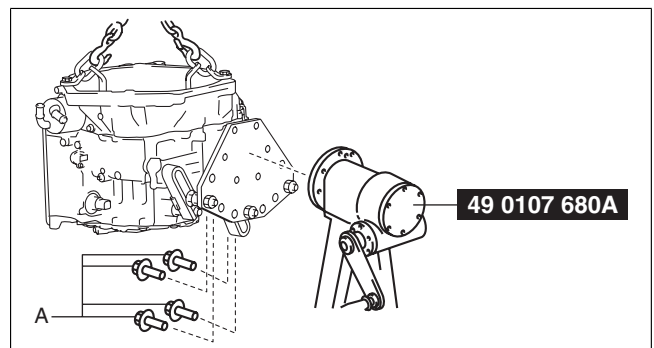
Note

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

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}

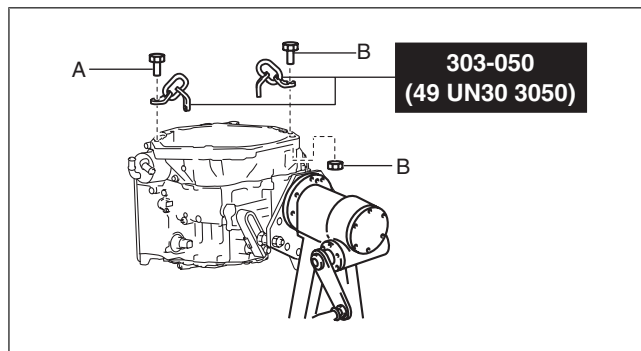


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(3) Remove the SSTs.

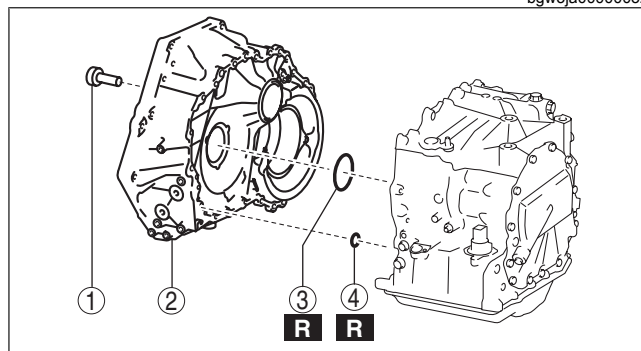
A : Part number: 9YA02 1015, or M10×1.5 bolt, length 35 mm {1.4 in}

B : M10 bolt, nut



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6. Remove the converter housing using the following procedure:

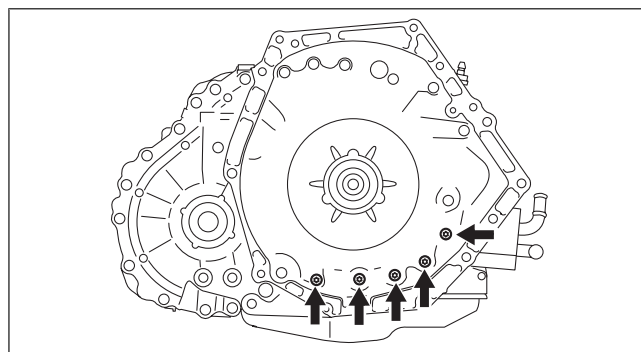


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(1) Remove the bolts shown in the figure.

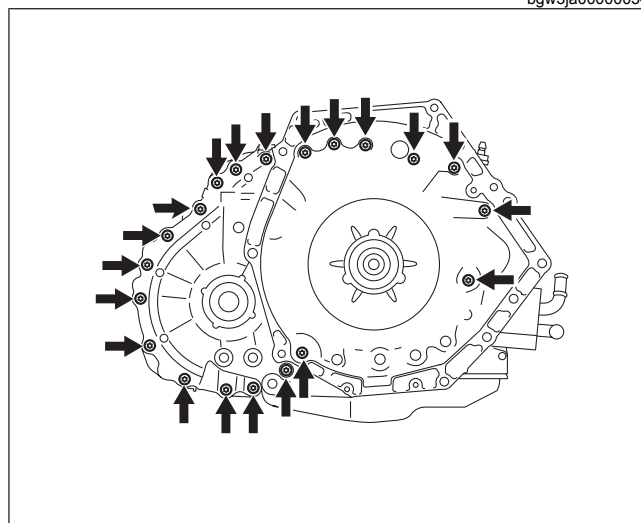
Caution

- Sealant has been applied to the removed bolts. If the bolts are reused it could cause ATF leakage, therefore when performing assembly use new bolts.



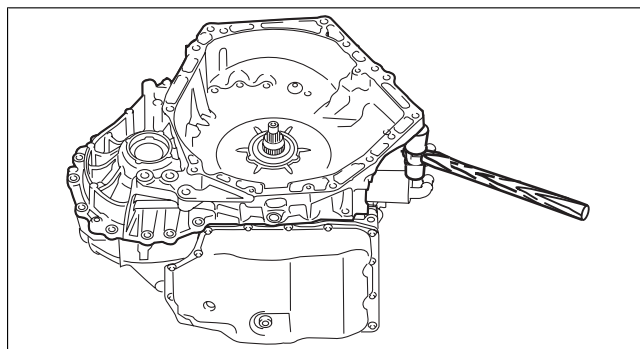
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(2) Remove the bolts shown in the figure.

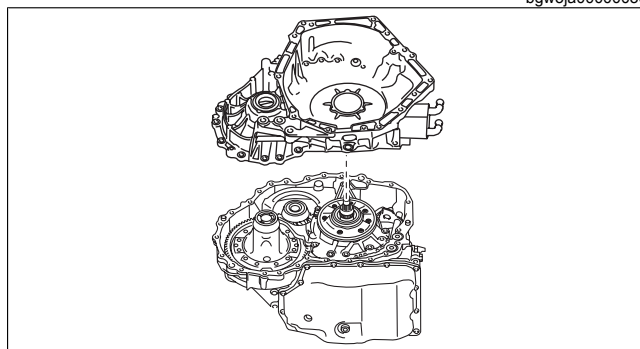


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(3) Lightly tap the converter housing using a plastic hammer to remove it.



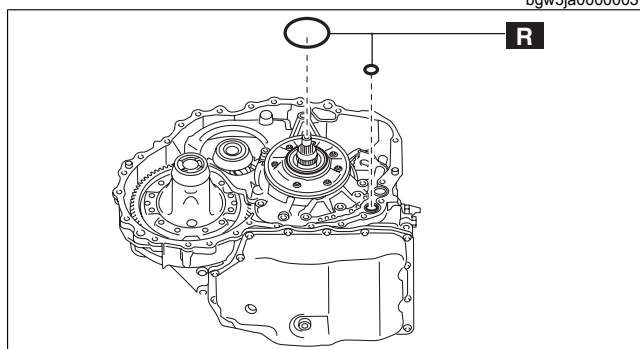
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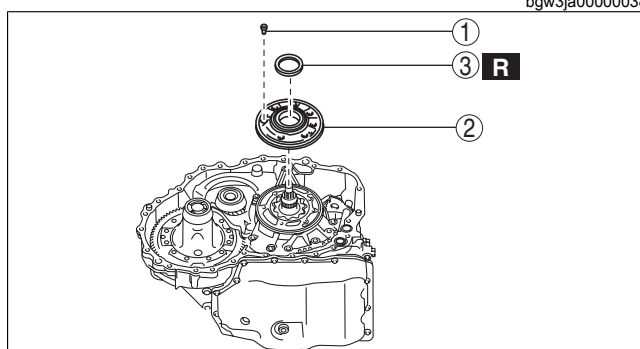
(4) Remove the O-rings.

1	25 bolts
2	Converter housing
3	O-ring (oil pump)
4	O-ring (oil cooler oil passage)



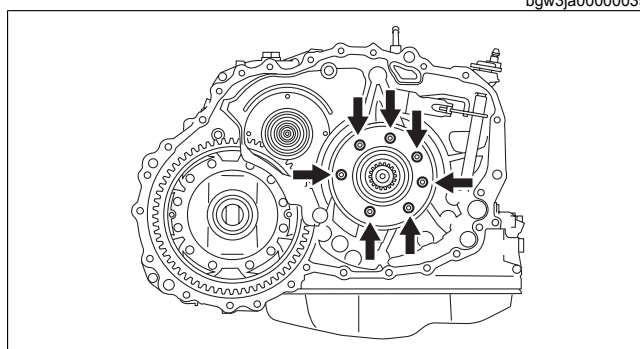
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7. Remove the oil seal using the following procedure:



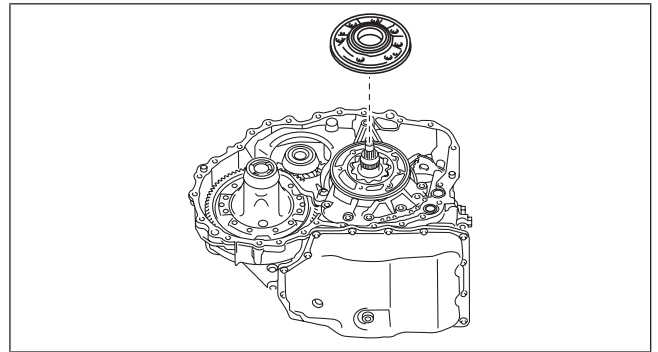
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(1) Remove the bolts shown in the figure.



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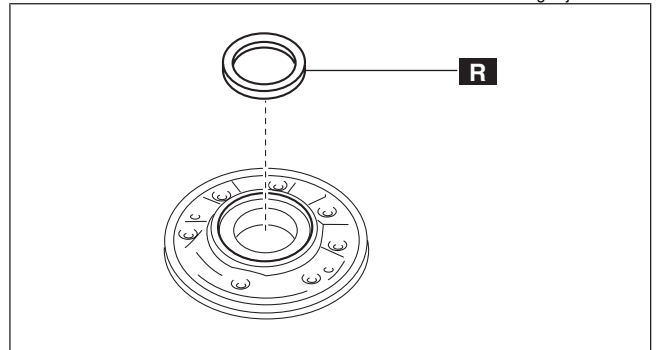
(2) Remove the oil pump cover.



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(3) Remove the oil seal.

1	7 bolts
2	Oil pump cover
3	Oil seal



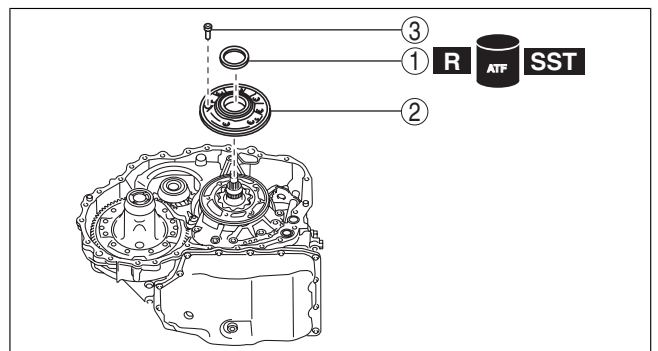
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8. Assemble a new oil seal using the following procedure:

Caution

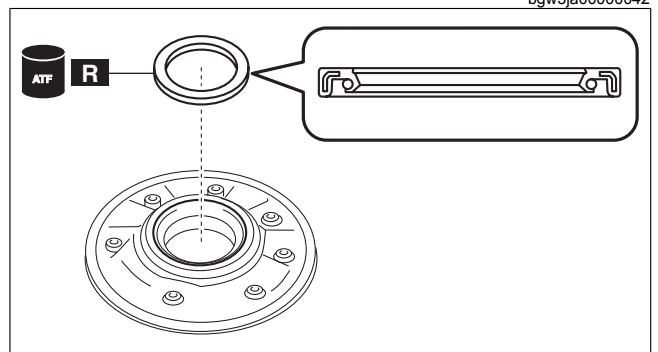
- If an oil seal is reused it could cause ATF leakage, therefore use a new oil seal.

- (1) Apply ATF (ATF FZ) to the engagement area of the new oil seal and oil pump cover.
- (2) Apply ATF (ATF FZ) to the lip of the new oil seal.



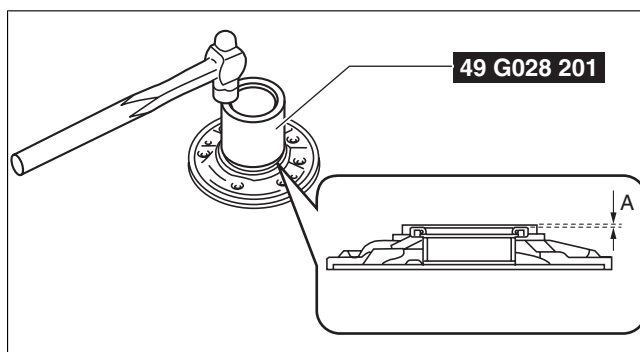
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- (3) Assemble the new oil seal to the position shown in the figure using the SST.



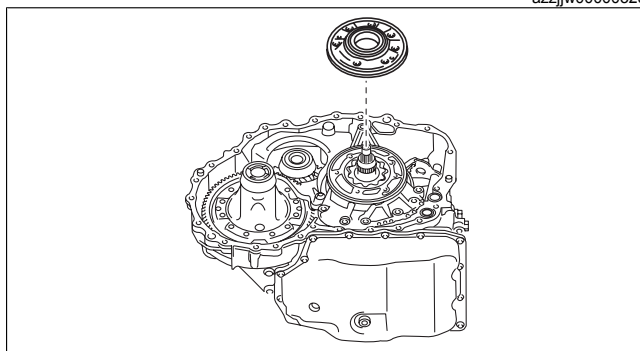
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A : 0—0.5 mm {0—0.01 in}

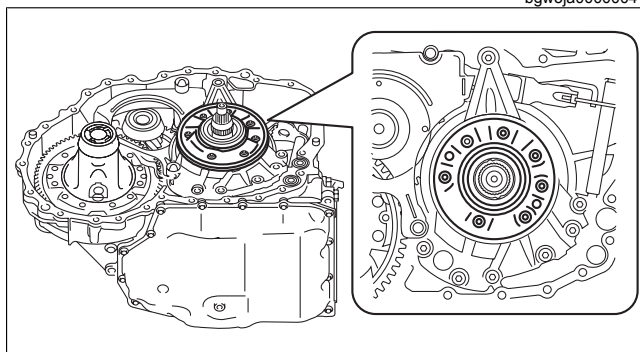


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(4) Assemble the oil pump cover.



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

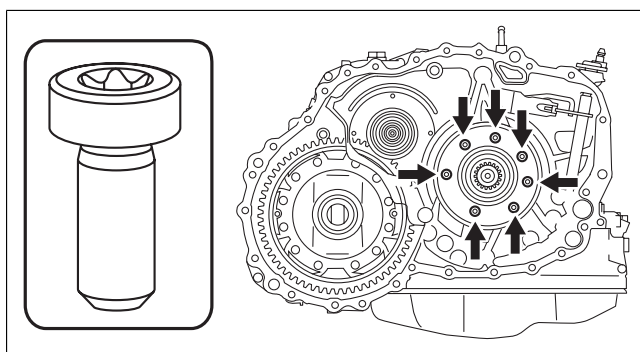
Note

- Bolt size: M6×1.0 bolt, length approx. 13 mm {0.51 in}

Tightening torque

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

1	Oil seal
2	Oil pump cover
3	7 bolts (M6×1.0 bolt, length approx. 13 mm {0.51 in})



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9. Assemble the converter housing using the following procedure:

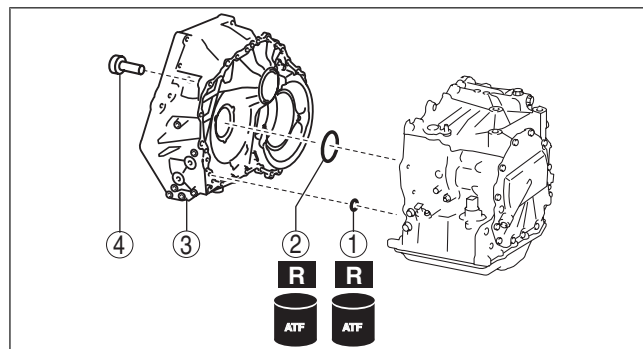
* : Of the 25 bolts, 5 are coated with sealant

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

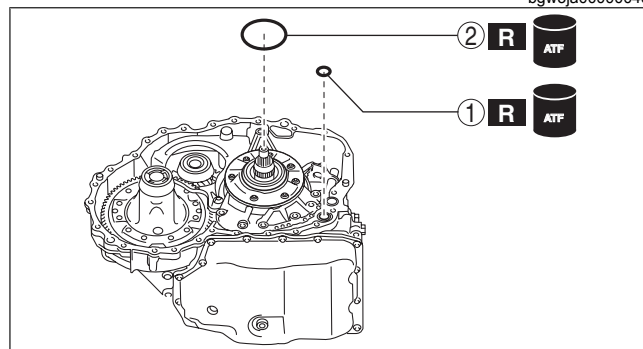
Caution

- 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 the new O-rings.



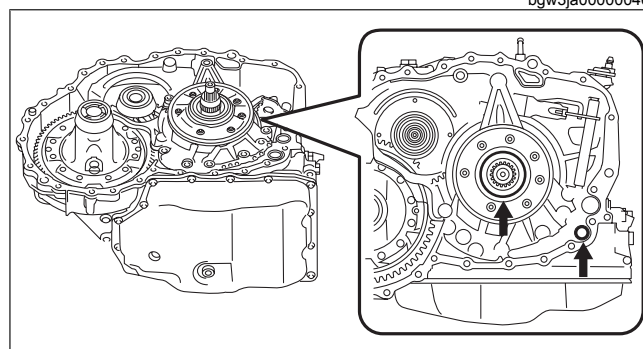
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bgw3ja00000046

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.



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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.

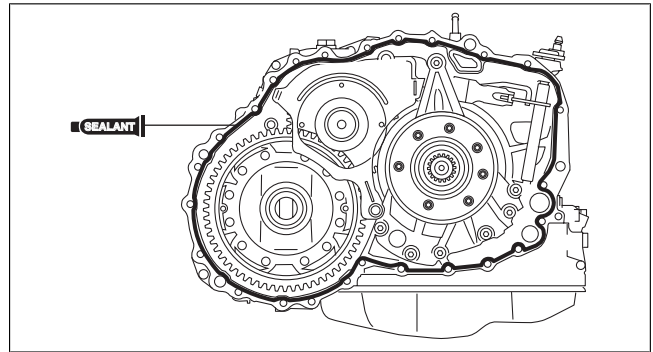
(3) Apply sealant (silicone sealant TB1217E) to the transaxle case.

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.

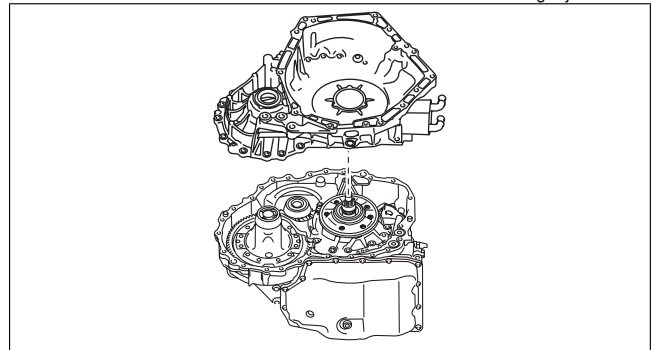
Note

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



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

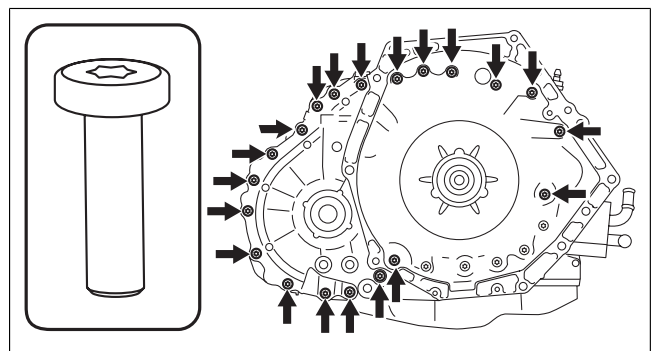


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- (5) Assemble and temporarily tighten the bolts to the positions shown in the figure.

Note

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



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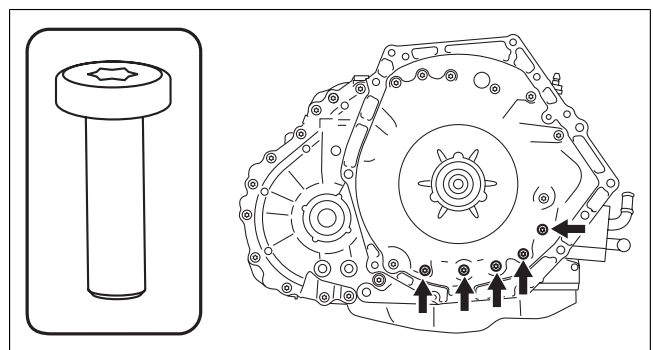
- (6) Assemble and temporarily tighten the new bolts to the positions shown in the figure.

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)



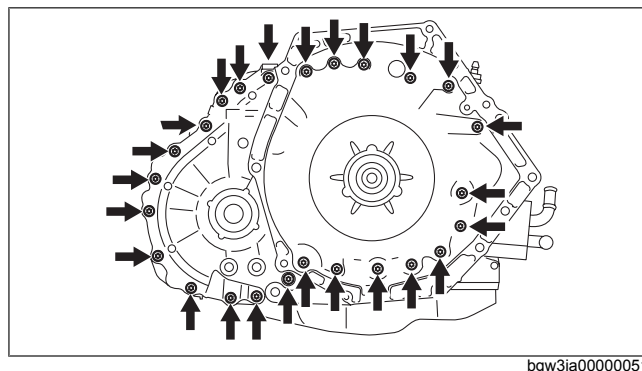
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(7) Tighten the bolts shown in the figure.

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})



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10. 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 (oil cooler in particular) 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.

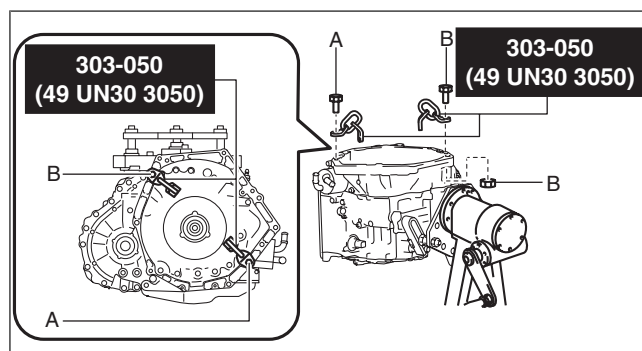
- (1) Assemble the SSTs using part number: 9YA02 1015, or M10×1.5 bolt, length 35 mm {1.4 in}, and M10 bolt, nut.

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}



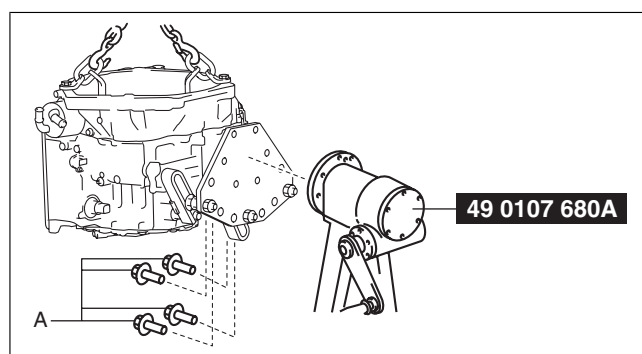
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- (2) Using chain hoists, remove the transaxle from the SST (engine stand).

Caution

- When removing the transaxle from the SST (engine stand) using chain hoists, be careful not to allow the transaxle (oil cooler in particular) 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}

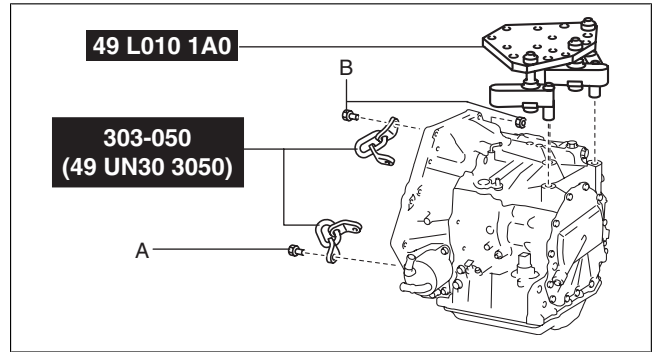


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(3) Remove the SSTs.

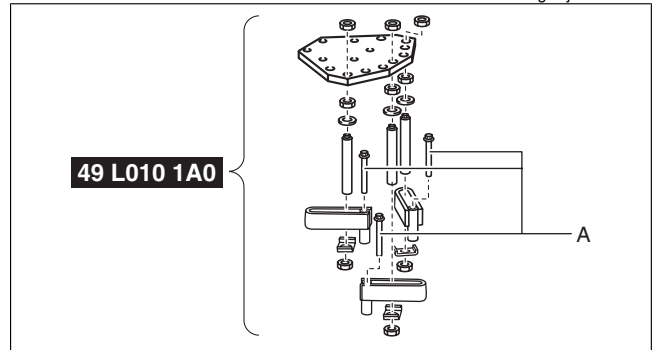
A : Part number: 9YA02 1015, or M10×1.5 bolt, length 35 mm {1.4 in}

B : M10 bolt, nut



(4) Disassemble the SST.

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

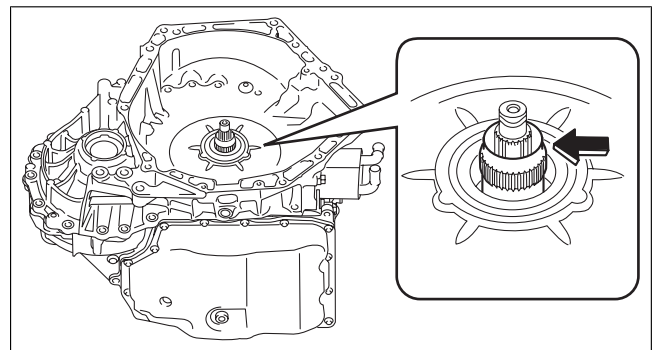


11. Assemble the torque converter using the following procedure:

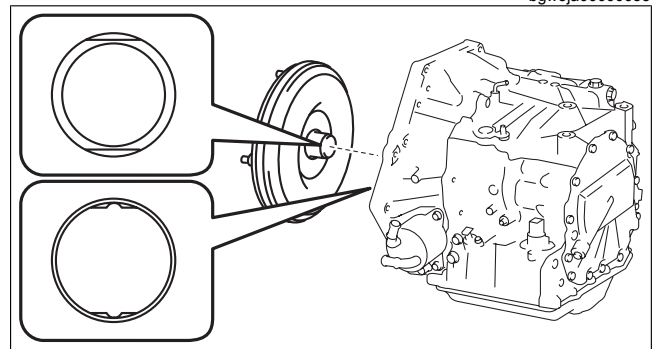
(1) Apply ATF (ATF FZ) to the stator shaft end of the oil pump shown in the figure.

Caution

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



(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.



(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

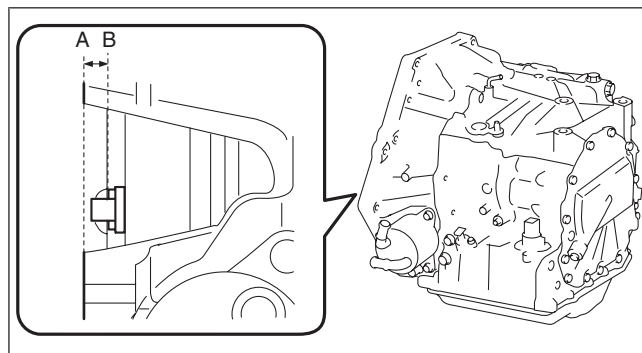
- If not within the specification, remove the torque converter and reassemble.

Note

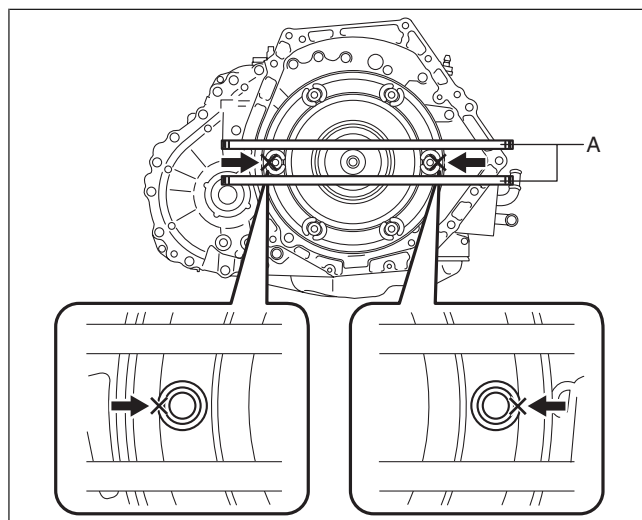
- Measurement method

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

A : Straight edge ruler



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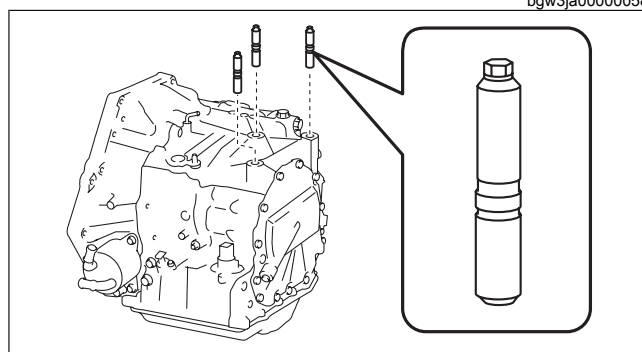


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12. Assemble and tighten the stud bolts.

Tightening torque

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

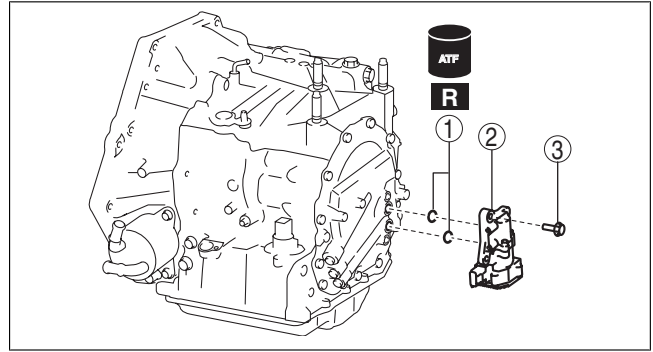


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13. Assemble the electric AT oil pump using the following procedure (only vehicles with i-stop):

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:

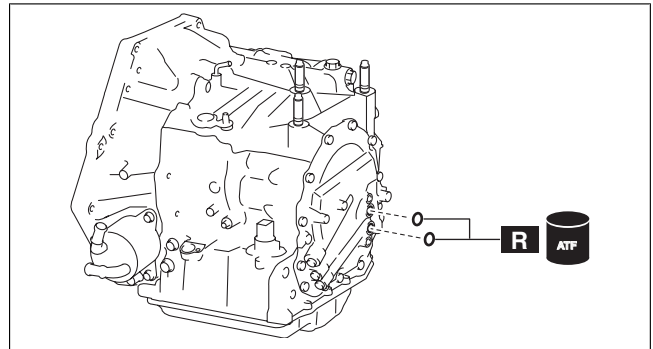
Caution

- 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.

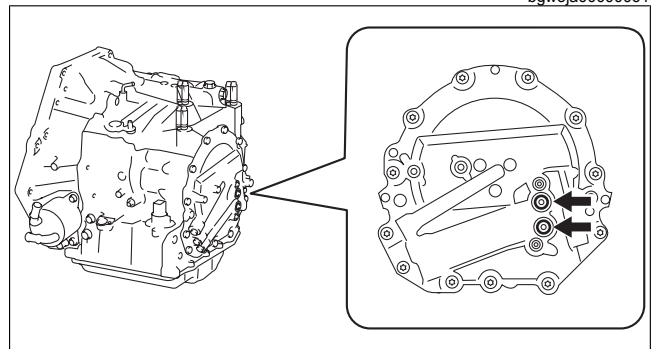


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(2) Remove any remaining old sealant on the contact surfaces of the end cover and electric AT oil pump, and clean degrease the contact surfaces.

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.

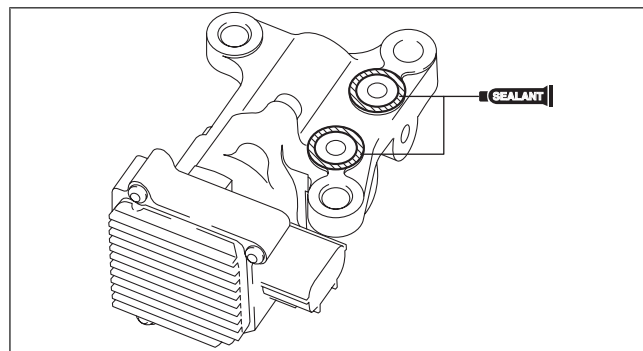
Caution

- 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.

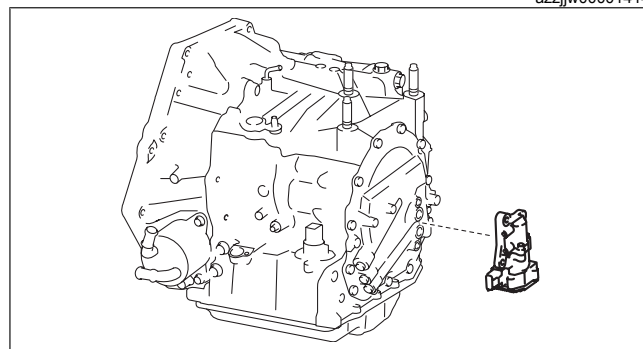
Note

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

- (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.

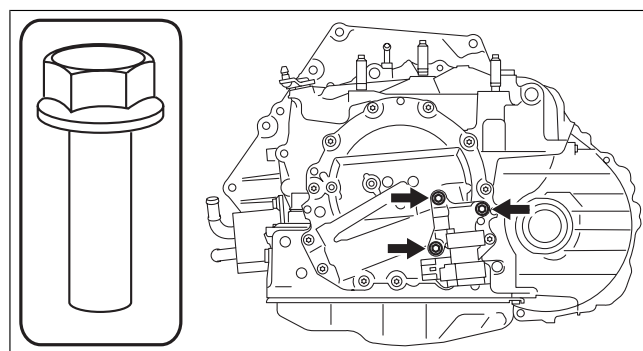
Note

- 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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