

OIL PUMP INSPECTION

id051700663300

Side Clearance Inspection

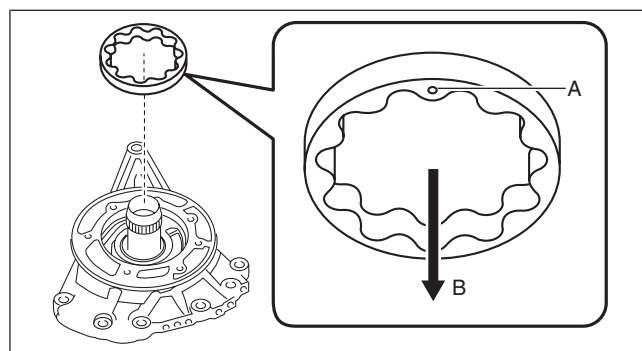
1. Assemble the outer rotor.

Note

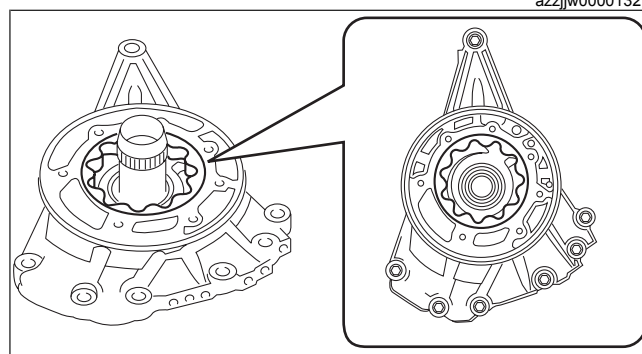
- Assemble with the outer rotor marking is facing the oil pump housing.

A : Mark

B : Assembly direction (oil pump housing side)



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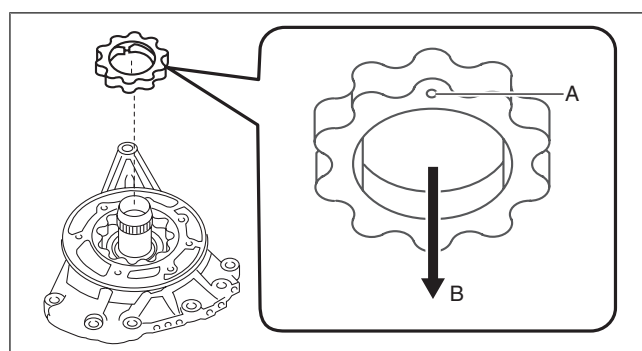
2. Assemble the inner rotor.

Note

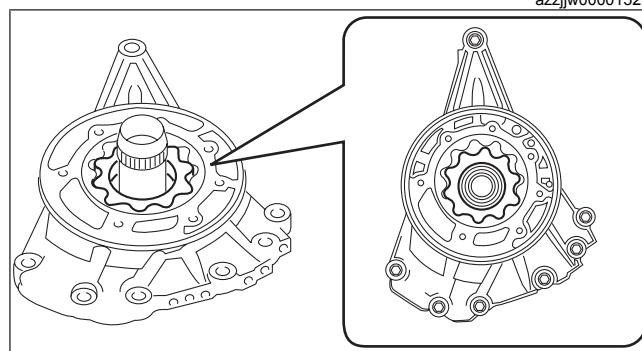
- Assemble with the inner rotor marking is facing the oil pump housing.

A : Mark

B : Assembly direction (oil pump housing side)



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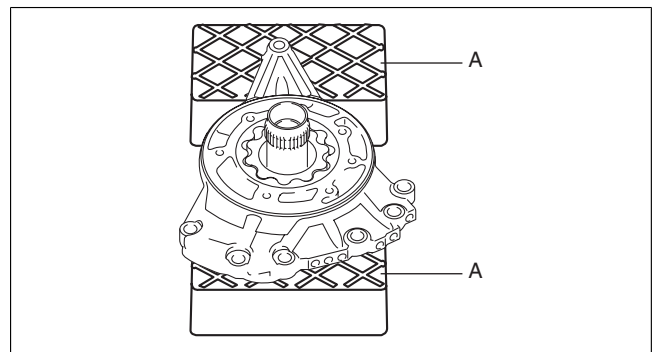
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3. Set the assembled parts on the workbench as shown in the figure.

Caution

- To reduce error during the side clearance measurement, use the rubber plates to adjust the alignment surface of the oil pump housing with the oil pump cover so that it is level.

A : Rubber plate



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4. Measure the side clearance in four locations (each separated by 90°) and calculate the average value.

Caution

- Measure the inner rotor and outer rotor side clearances.

Note

- Recommended measuring instrument: Thickness gauge, straight edge ruler

A : Inner rotor

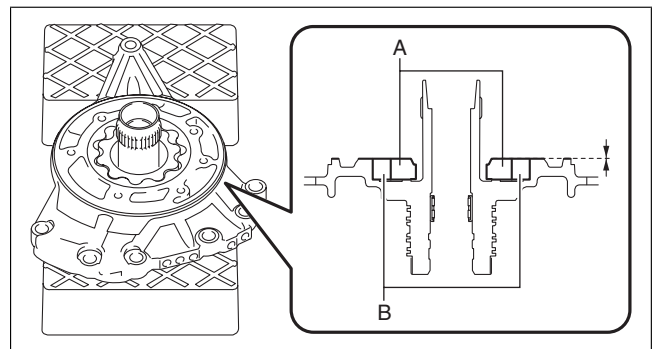
B : Outer rotor

Maximum:

- Inner rotor: 0.045 mm {0.0017 in}
- Outer rotor: 0.050 mm {0.0019 in}
- If it is more than the maximum specification, replace the oil pump with a new one.

Note

- Measurement method

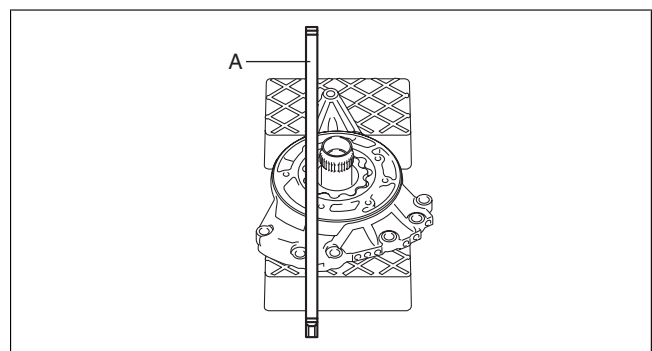


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- (1) Set the straight edge ruler along the alignment surface of the oil pump housing with the oil pump cover as shown in the figure.

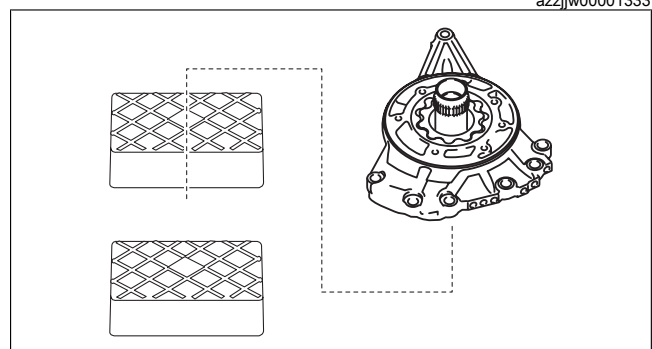
A : Straight edge ruler

- (2) Measure the gaps between the straight edge ruler and the inner rotor, and the straight edge ruler and the outer rotor using a thickness gauge.



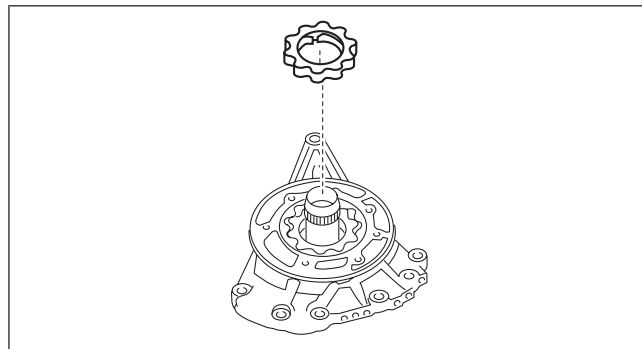
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5. Take the parts in which the side clearance has been measured off the rubber plates.



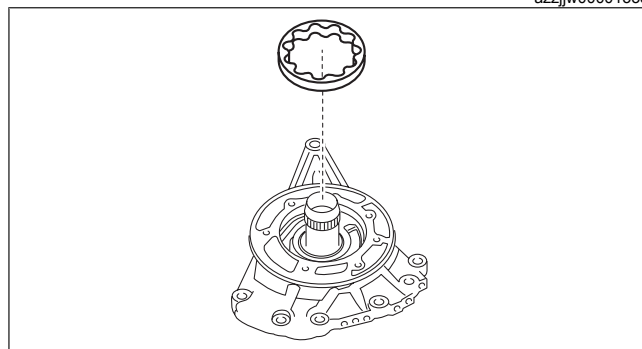
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6. Remove the inner rotor.



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7. Remove the outer rotor.



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Bush Inner Diameter Inspection (in Oil Pump Cover)

1. Measure the inner diameter of the bush shown in the figure.

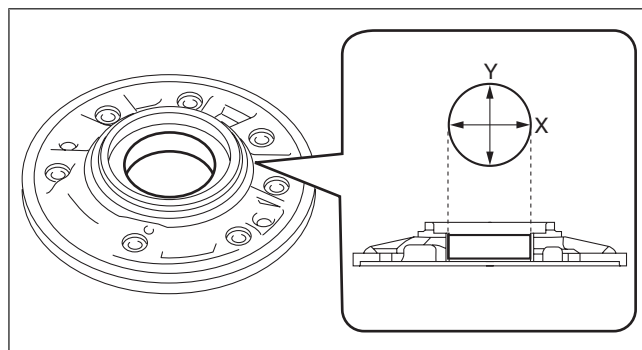
Note

- When measuring, measure near the center of the bush avoiding the dimple, and then calculate the average value of the X and Y directions as shown in the figure.
- Recommended measuring instrument: Cylinder gauge or caliper gauge

Maximum:

44.006 mm {1.7325 in}

- If it is more than the maximum specification, replace the oil pump cover with a new one.

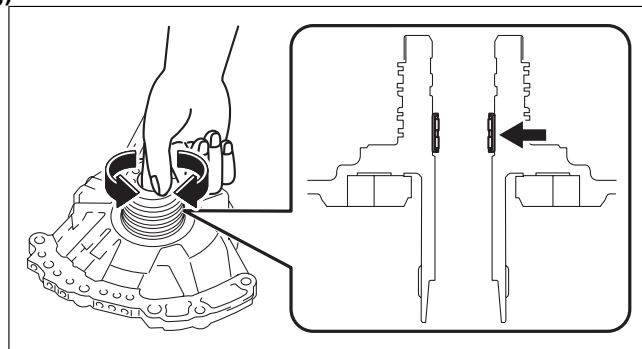


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Radial Needle Bearing Inspection (in Oil Pump Housing)

1. Rotate the radial needle bearing shown in the figure by hand and verify that there is no malfunction in the radial needle bearing (rotation sticking).

- If there is a malfunction, replace the oil pump with a new one.



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