HYDRAULIC LASH ADJUSTER, ROCKER ARM [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

id0110h3009200

Purpose, Function

HLA

- The HLA maintains the valve clearance at a constant 0 mm and maintenance-free valve clearance is realized.

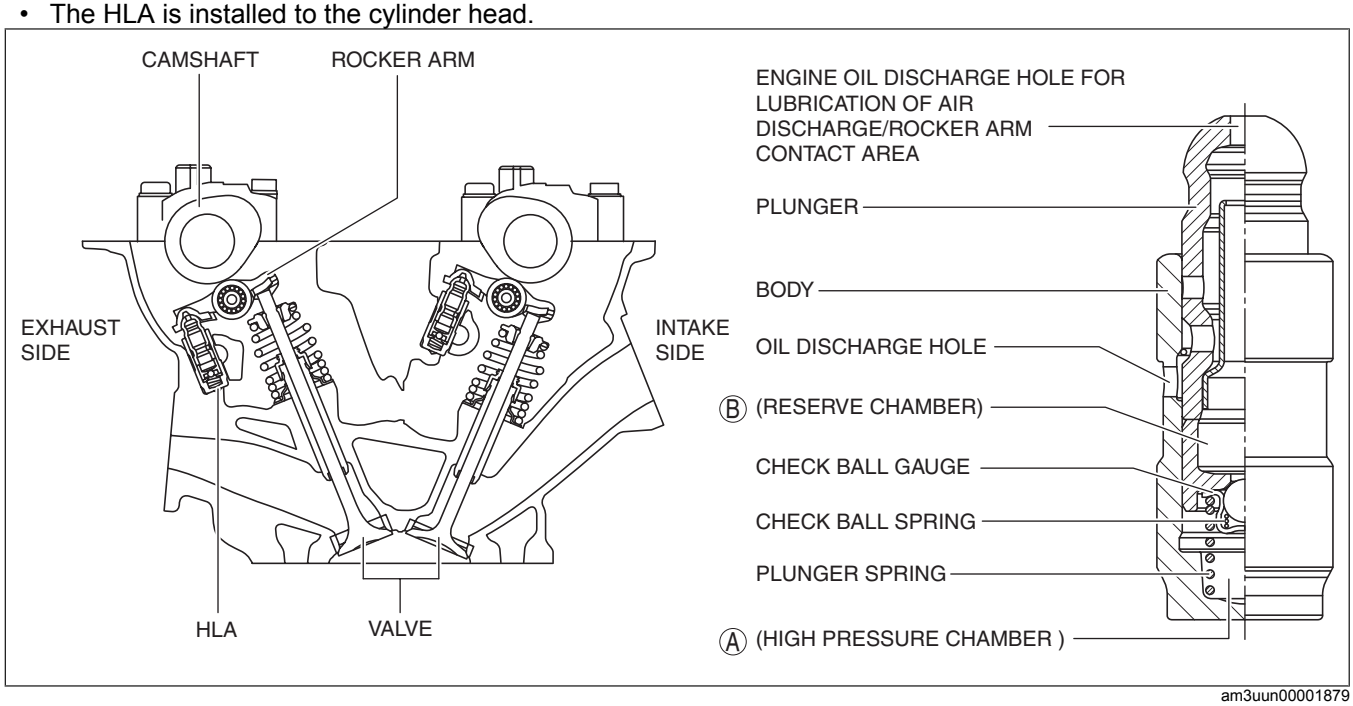
Rocker arm

- With the adoption of the needle roller bearing built into the rocker arm, the contact to the cam employs rolling contact to reduce sliding resistance.

Construction

HLA

- The HLA is installed to the cylinder head.



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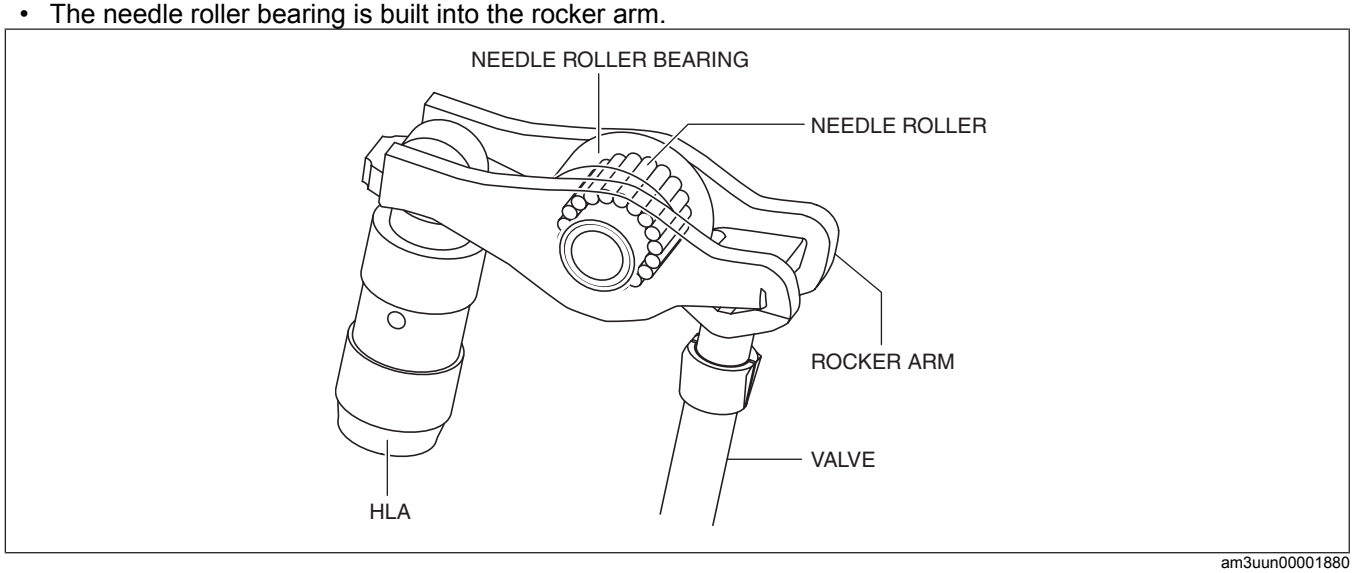
Rocker arm

- The rocker arm is installed to the HLA and upper area of the valve.
- The needle roller bearing is built into the rocker arm.



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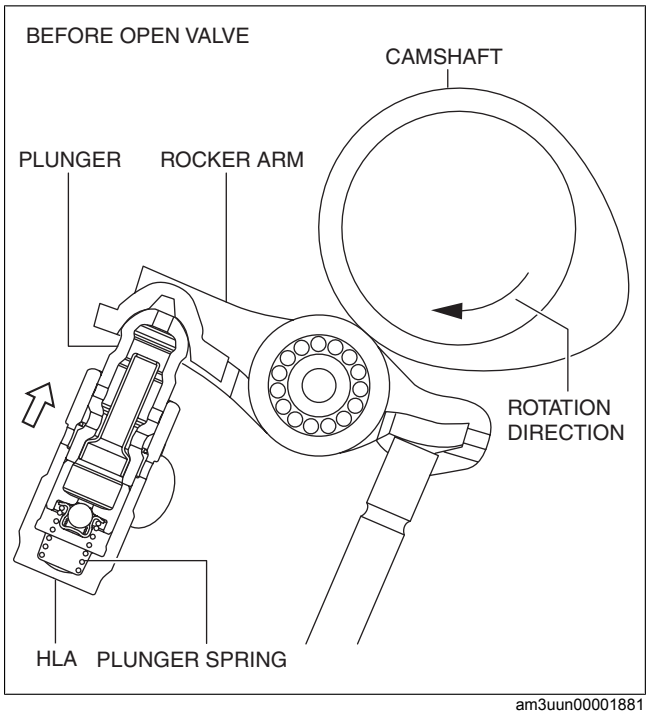
Operation

Before valve opening

1. The plunger presses up the rocker arm by the spring force of the plunger spring to maintain the valve clearance at 0 mm.



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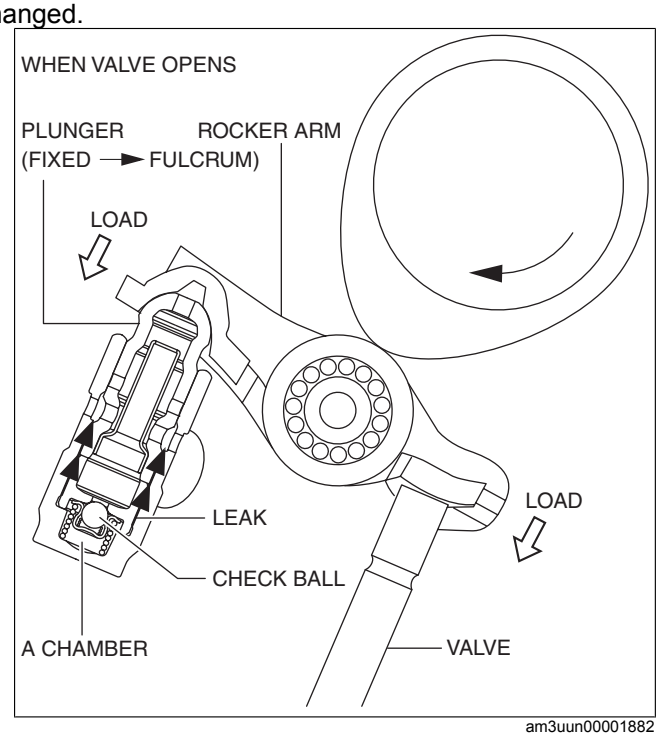
During valve opening

1. If the cam presses down the rocker arm, load is applied to the plunger and valve.
2. If load is applied to the plunger, the hydraulic pressure in the high pressure chamber (A chamber) increases and the check ball closes the hydraulic passage.
3. If the hydraulic passage is closed, the plunger is fixed becoming the rocker arm pivot point because the volume of the engine oil in the high pressure chamber is not changed.
4. The rocker arm presses down the valve.



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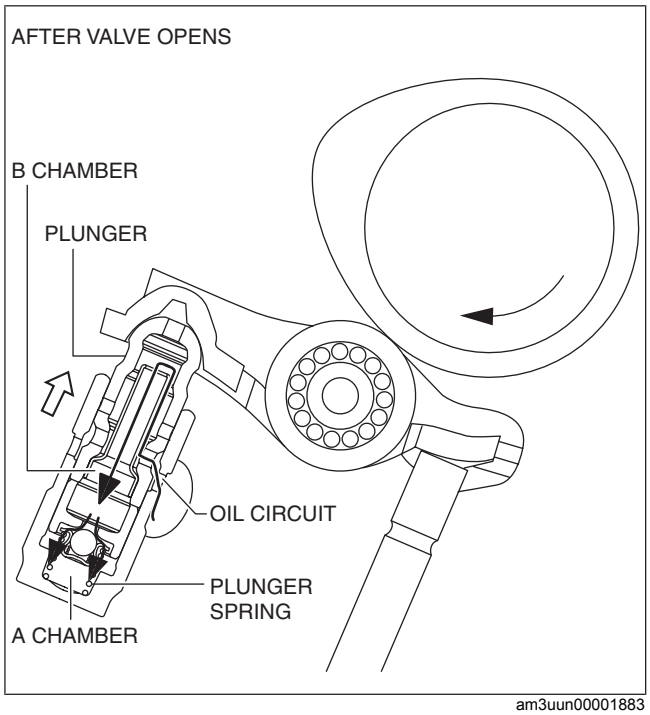
After valve opening

1. If load is not applied to the plunger, the plunger spring presses up the plunger (maintains valve clearance at 0 mm).
2. Because the capacity of the high pressure chamber (A chamber) increases in Step 1, the check ball is opened and engine oil flows from the reserve chamber (B chamber) to the high pressure chamber (A chamber) to prepare for the next step.

3. The oil in the reserve chamber (B chamber) which is decreased by supplying it to the high pressure chamber (A chamber), is supplied from the oil passage of the cylinder head.



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