

Section A - A

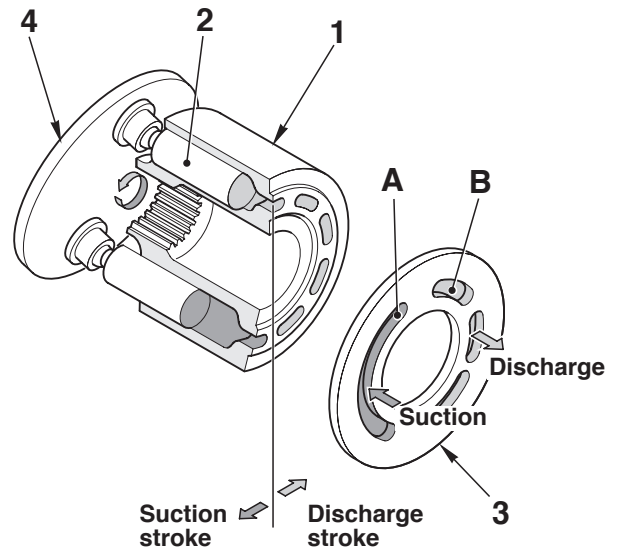
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- 1. Input shaft
- 2. Rocker pin
- 3. Adjustment screw
- 4. Swash plate
- 5. Piston
- 6. Cylinder block
- 7. Valve plate

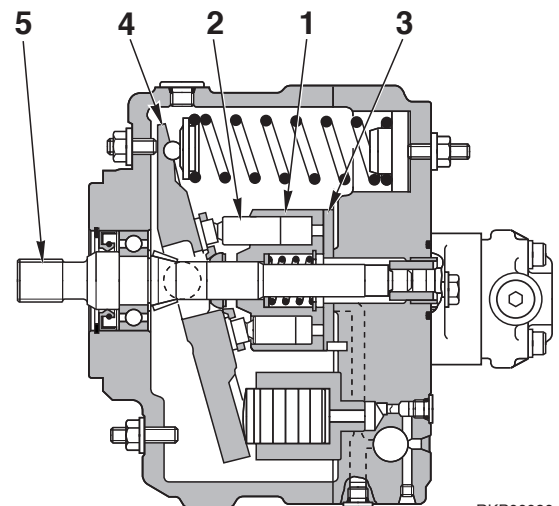
- 8. Spring
- 9. Adjustment screw
- 10. Joint
- 11. Control piston
- 12. Sliding shoe
- 13. Adjustment screw

1. Operation

- This pump has the functions of load response control and constant horsepower control.
There are nine pistons (2) assembled inside cylinder block (1), and the face is in contact with valve plate (3).
Suction port **A** and discharge port **B** are provided in valve plate (3).
In this structure, swash plate (4) is secured to the body at a certain angle, and pistons (2) rotate along swash plate (4).
- By rotating shaft (5), cylinder block (1) rotates, and pistons (2) assembled inside cylinder block (1) move in a reciprocal motion following swash plate (4). This movement performs the suction and discharge action of the pump.
- Each of the nine pistons (2) performs one suction and discharge stroke for each rotation of cylinder block (1), so the rotation of shaft (5) provides continuous suction and discharge.
The volume of the stroke of piston (2) depends on the angle of swash plate (4), so by changing the angle of swash plate (4) it is possible to change the amount of the discharge flow.



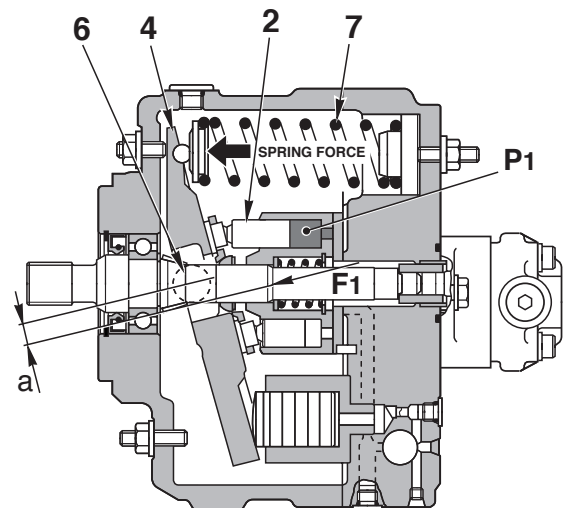
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2. Constant horsepower control

- Rocker pin (6) is assembled to swash plate (4), and it is installed to the body to make it possible to change the swash plate angle. In addition, swash plate (4) is equipped with spring (7) and cylinder block piston (2), which acts in the opposite way to spring (7), and the discharge pressure of **P1** acts on piston (2).
- When the discharge pressure **P1** is lower than the set value of spring (7), the angle of swash plate (4) is held at the maximum position by spring (7).
When the discharge pressure becomes greater than the set value of spring (7), the angle of swash plate (4) is made smaller by total piston force **F1** x **a** and is held at the position where the discharge pressure is balanced with the force of the spring.



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