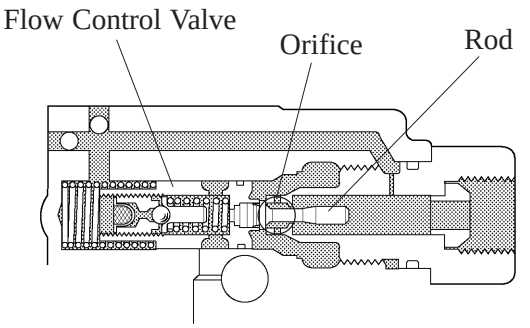
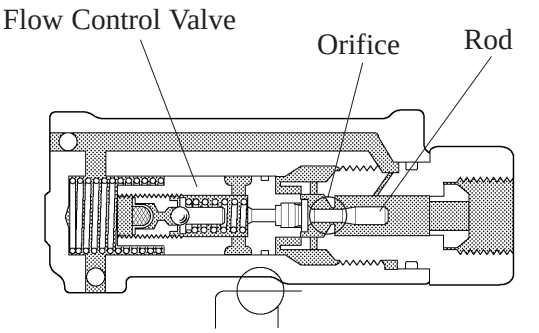
■POWER STEERING VANE PUMP

1. Construction

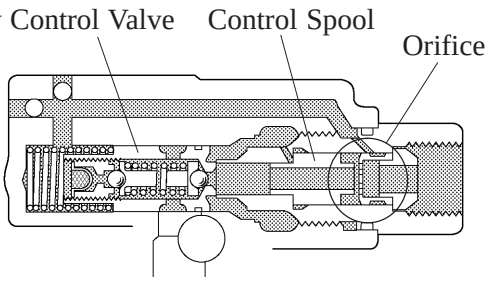
In this pump, the control spool to control the pump flow volume in the middle and high range of the pump speed has been discontinued and a rod for the flow control valve which decides the flow volume opening area has been established instead.
Other basic structure and operation are the same as before.



New Model (1MZ-FE Engine) 208CH39



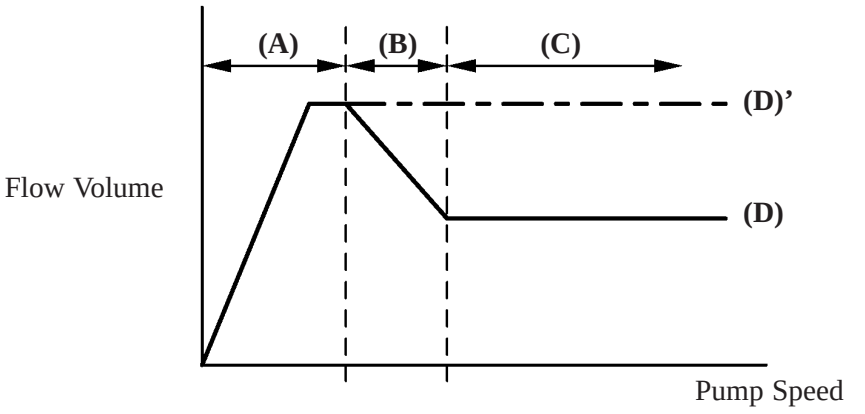
New Model (1AZ, 2AZ-FE Engine) 208CH40



Previous Model (1MZ-FE Engine) 208CH38

2. Operation

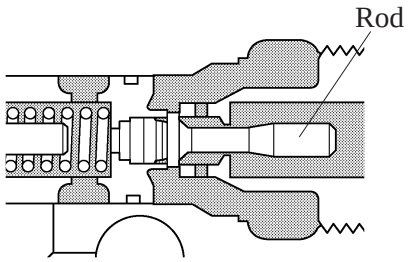
▶ Flow Volume Characteristics ◀



208CH45

Low Speed Range (A)

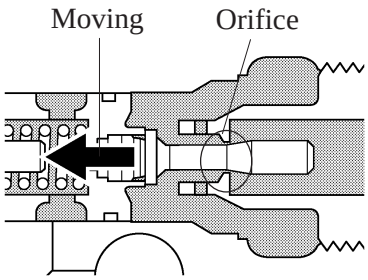
Flow volume increases in accordance with the increase of pump speed.



208CH41

Middle Speed Range without Steering (B)

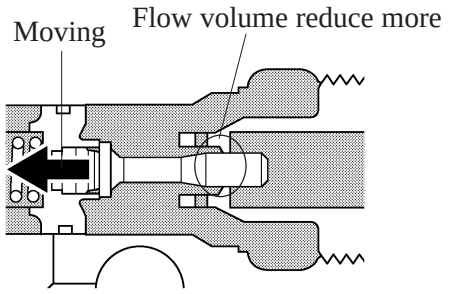
The flow control valve moves to the left and reduces the flow volume by drawing the orifice accordance to the change of the shaft diameter of the rod.



208CH42

High Speed Range without Steering (C)

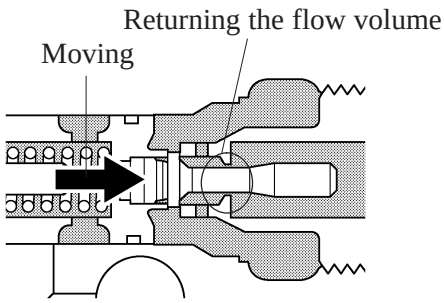
The flow control valves moves further left and with the maximum shaft diameter of the rod, the flow volume reduces more.



208CH43

During Pressure Loading (D → D')

If operating the steering in the middle and high speed range, the flow control valve moves to the right according to the pressure increase of the vane pump resulting in opening the orifice and returning the flow volume.



208CH44