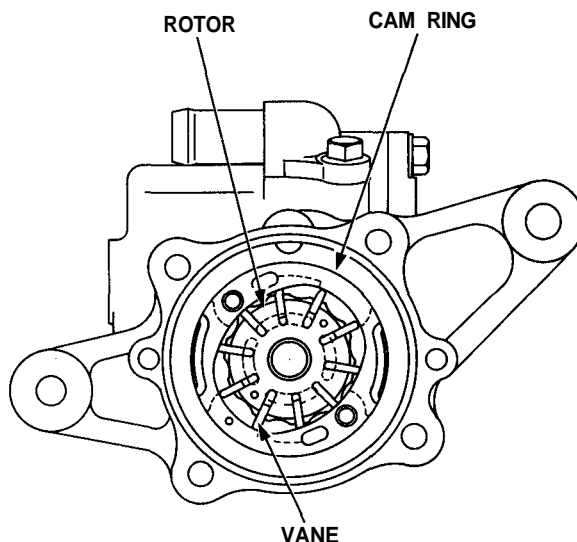
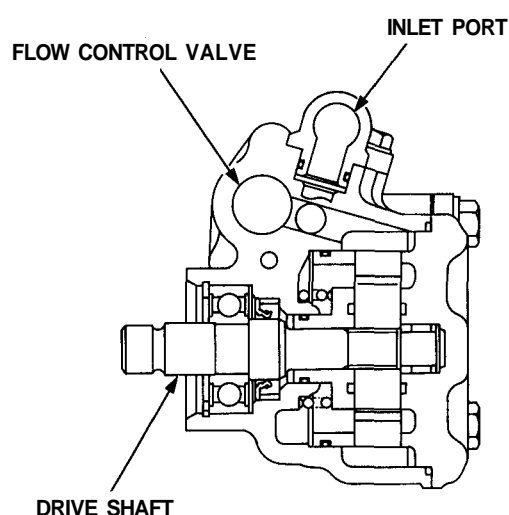




Steering Pump

Construction

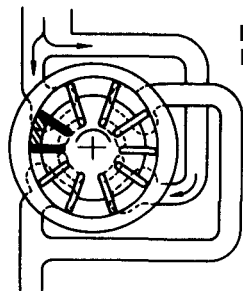
The pump is a vane-type incorporating a flow control valve (with an integrated relief valve) and is driven by a V-belt from the crank pulley. The pump features 10 vanes. Each vane performs two intake/discharge operations for every rotation of the rotor. This means that the hydraulic fluid pressure pulse becomes extremely small during discharge.



Operation

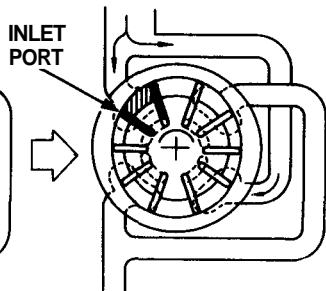
The belt-driven pulley rotates the rotor through the drive shaft. As the rotor rotates, the hydraulic pressure is applied to the vane chamber of the rotor and the vanes will rotate while being pushed onto the inner circumference of the cam ring. The inner circumference of the cam ring has an extended portion with respect to the center of the shaft, so the rollers move downward in the axial direction as the carrier rotates. As a result of this roller movement, the internal volume of the vane chamber will change, resulting in fluid intake and discharge.

START OF FLUID INTAKE



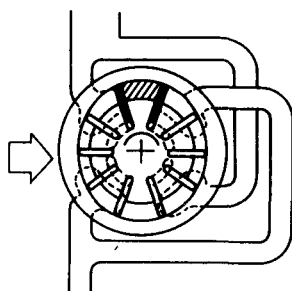
The vanes are pushed onto the inner circumference of the cam ring.

FLUID INTAKE



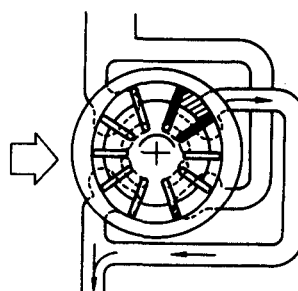
The volume of the vane chamber increases so that fluid is sucked in.

FLUID MOVEMENT



The sucked-in fluid moves toward the discharge port.

FLUID DISCHARGE



As the vanes return to the their original position on the inner side, the volume of the vane chamber decreases so the fluid is discharged from the discharge port.

(cont'd)