Outrigger Circuit Application

Machine: Mobile | **Actuator:** Cylinder | **Function:** Counterbalance, Lift/Lower, Load Holding

Prepared for :

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Prepared by :

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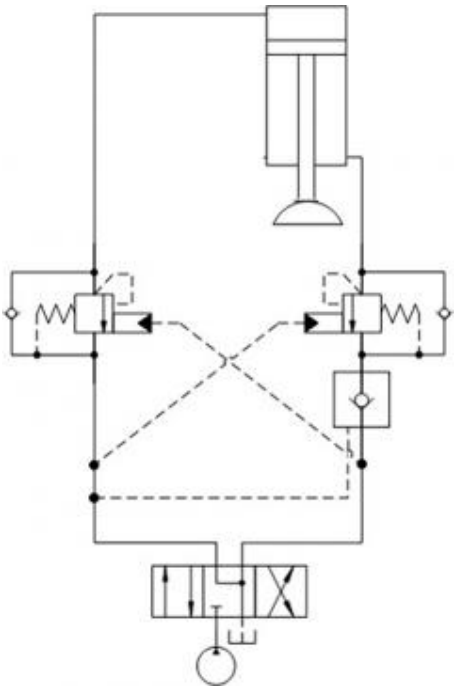
Schematics

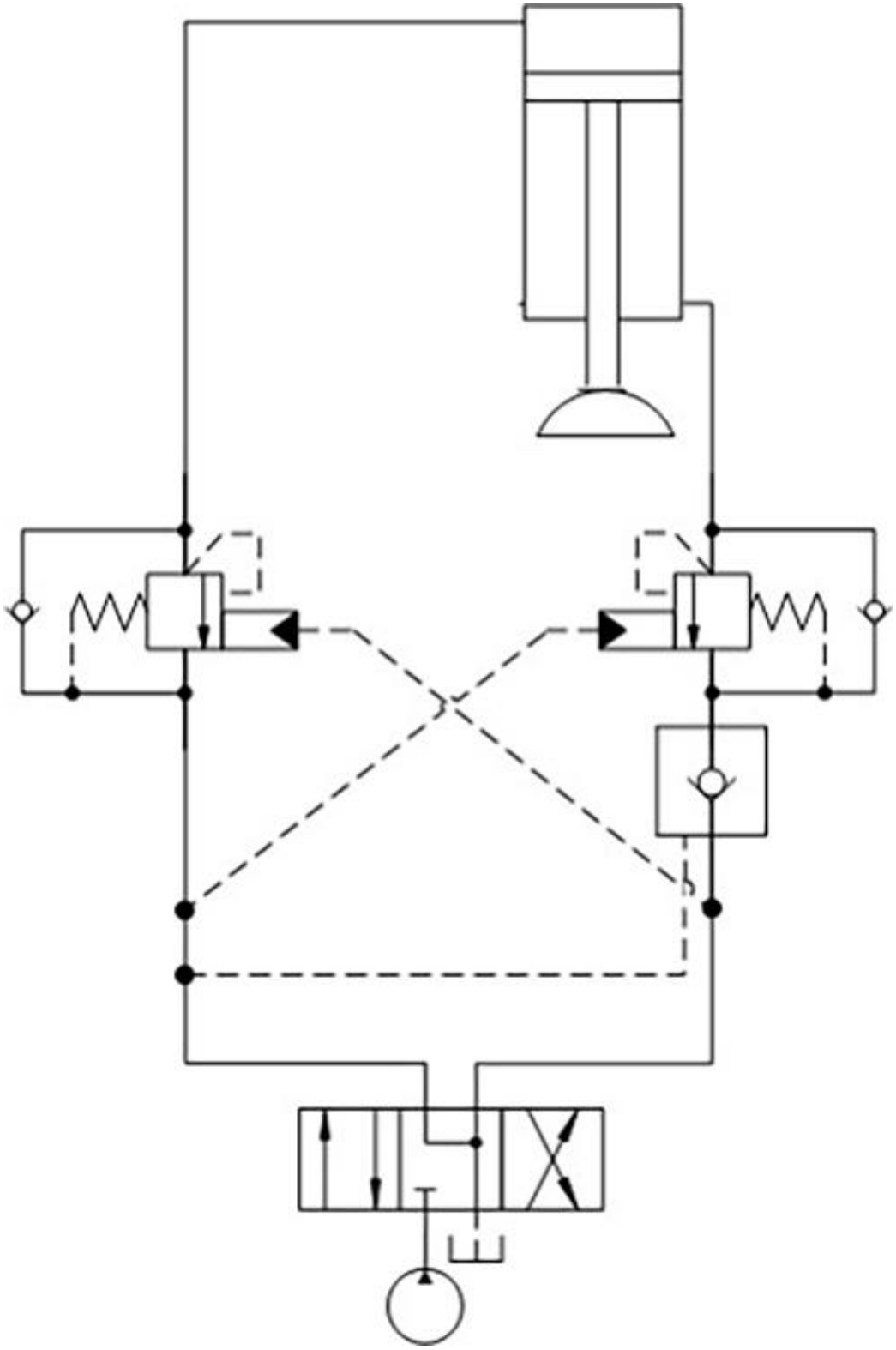


Summary

Related Products

Cartridges

CBAA - 3:1 pilot ratio, ultra-restrictive counterbalance valve
CKBB - Pilot-to-open check valve with standard pilot



The circuit shows a counterbalance valve CB in series with a standard pilot-to-open check valve CK on the cylinder rod end and a second counterbalance valve on the full bore end of the cylinder.

- **Load-sensitive counterbalance:** **CB****
- **Pilot-to-open check:** **CK*B, CKCR (5:1)**

Benefits of this circuit arrangement:

- The cylinder is an outrigger that lifts and stabilizes a vehicle. The weight of the rod and attachment is low so the setting of the counterbalance valve can be low. This allows the lowering of the outrigger at low inlet pressures.
- When the vehicle is driven on bumpy roads, the outriggers must be kept in the retracted position regardless

of pressure spikes that are incurred. The pilot check offers this function.

- The counterbalance valve on the piston side keeps the vehicle off the ground in the extended condition of the cylinder. The cylinder must also remain in a safe position in the event of a piston seal failure. This requires a counterbalance to be set above the maximum expected pressure that can be generated by the rod's area inside the cylinder.

For Sun technical support, contact Bernhard Kristen.