

The following circuit can be incorporated into the BPR's plumbing to improve the on stroke response time of the pump when a closed centered (deadheaded) valve is initially opened.

Orifice 1 and valve 2 establish an artificial bleed path during pump stand-by. This bleed path requires the pump to stay a higher minimum displacement in order to make up system leakage. This higher displacement enables the pump to develop system pressure more rapidly once the closed center directional control is opened. The bleed is closed off with load sensing pressure.

The amount of bleed is control by the size of orifice 1 and the magnitude of the load sensing differential pressure. The amount of bleed is determined by individual system needs. Spring setting of valve 2 should be some minimal pressure, say 50 psi.

