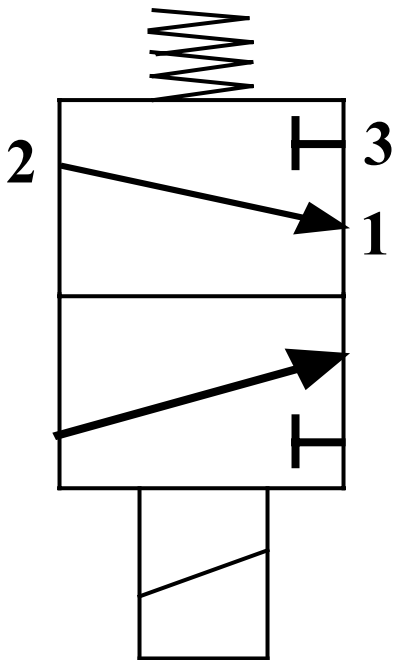


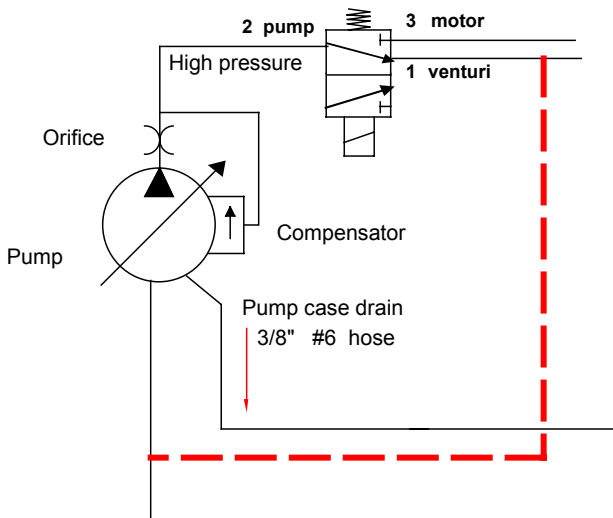
Hart-A-Gen 3-Way Valve



In the de-energized position the valve sends fluid from #2 (pump) outlet to #1 (venturi) line, which returns the flow to the pump inlet. Flow to #3 (motor) is blocked and the generator cannot run as the motor cannot turn.

By connecting #1 (venturi) line to motor outlet (or filter inlet) the flow during the de-energized state will flow through the main hydraulic circuit of the cooler, and the cooler fan will be activated. Pump case drain flows through the secondary circuit of the cooler and is also cooled.

In the energized position the valve sends fluid from #2 (pump) outlet to #3 (motor). The motor will now drive the alternator. Flow to the #1 (venturi) port is blocked, and the system operates in normal mode.



An alternative approach is shown in the schematic to the left. The red lines show the plumbing going directly from #1 (venturi) to the inlet of the pump.

This arrangement is easier to plumb, but the flow from the pump outlet travels over a very short path and does not go through the cooler. The pump case drain does go through the cooler, but the fan is not activated and no substantial cooling takes place.

Since there is no electrical load on the system the amount of heat developed is very minimal, and either approach works well with heat usually being less than 110 °F.