

Circuit Schematics

Handout Womack reference books – introduce symbols
Refer to schematics in Vickers text – use of standard colors

Pressure Relief Valves

Necessary for what type of systems? Common or not?

Direct acting relief valve –

Operation, connections

Adjustable

Advantages – quick response, affordable

Disadvantages – for higher flow, noise results

- override – difference between cracking pressure and full flow pressure

Pilot operated relief valve-

Operation, connections

Adjustable – how?

Function of light spring

Failure modes?

Venting of pilot operated pressure relief valve-

Operation, connections

Why?

Remote control of pilot operated pressure relief with a remote direct-acting pressure relief

Methods to achieve multiple selectable system pressures

A pressure relief valve is critical safety component! Does always guarantee that the pressure in the equipment will not exceed the setting?

What are the power implications of pressure relief valves?

Homework –

1. Study symbols on pg 3 & 4 of Womack book.
2. Build a circuit that employs a hydraulic motor that can rotate either way. The system should be electrically controlled with settings of “forward”, “reverse”, and “stop.” Limit the system pressure to 1200 psi. Design the system such that the motor ports are block when not rotating and use any other components that are necessary for the system. Be prepared to present your design in class.
3. Answer questions 1 through 8 at the end of chapter 10 in the Vickers text.