

Pulsar VPL Directional Control

Low Pressure Standby Inlet for Fixed Displacement Pumps



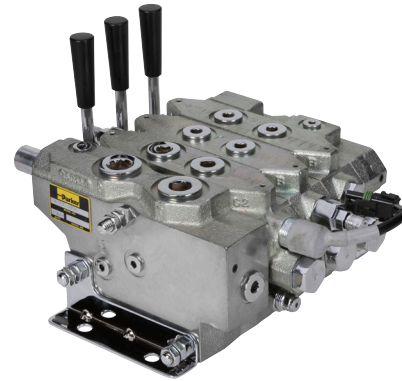
Reduced Fuel Consumption and Heat Generation:

Challenge

A refuse truck manufacturer wanted the low cost of a fixed displacement pump and the efficiency of a pressure-compensated load-sense valve. The problem was that the normal standby pressure of 200 PSI for the bypass compensator generated heat and consumed fuel while the truck was roading.

Solution

Parker developed a special low-pressure unloading inlet for the VPL directional control valve. This inlet was able to reduce the low-pressure standby pressure from 200 PSI to 45 PSI. This was accomplished by adding a normally-open solenoid that would stroke a piston, thereby forcing the unloader spool to a wide open position. To operate the valve, the solenoid is energized, allowing the unloader to regulate the margin pressure back to 200 PSI. Based upon pump flow of 45 GPM when the truck was roading, the HP consumption was reduced from 5.25 to 1.18.



Reduced Lifetime Ownership Costs



Eliminated Waste & Reduced Energy Consumption



Increased Productivity

Success Factors:

- Cost effective modification of the standard bypass unloader inlet for the VPL
- Use of pressure reducing valve already in the inlet as the pilot pressure source
- Application expertise for refuse collection vehicles

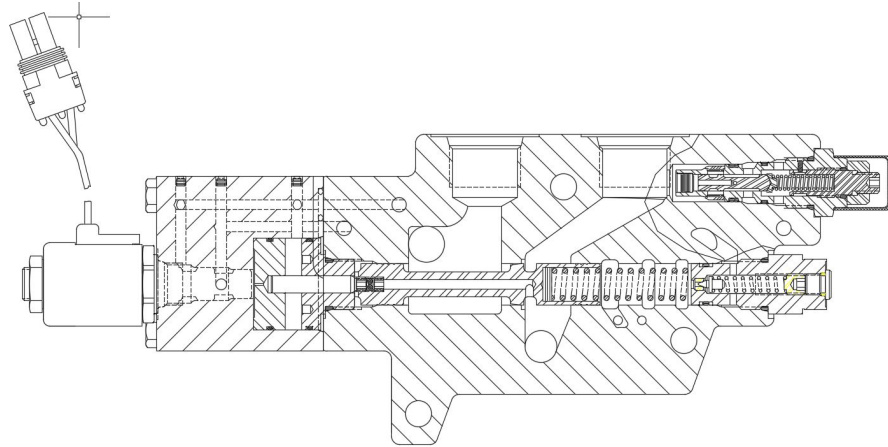
Customer Values:

- Up to \$7,200/year in fuel savings based on reduced HP consumption
- Up to \$400/machine savings with use of fixed pump
- Up to \$95 saved in hardware and installation labor with use of integrated solution
- Low-pressure standby prevents functions from moving if a spool is inadvertently selected.

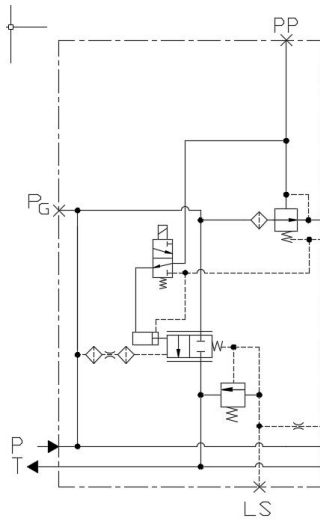


ENGINEERING YOUR SUCCESS.

Low Pressure Inlet Cut-A-Way



Low Pressure Inlet Schematic



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www.parker.com/hydraulicvalve