



News Release

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New Parker P1/PD Pump Torque Limiter Provides Horsepower Control for Mobile and Industrial Applications, Allows More Efficient Use of Electricity or Fuel

MARYSVILLE, OH, February 17, 2009 – Parker Hannifin, the global leader in motion and control technologies, has introduced an optional torque limiter for 45 - 140 cc/rev model P1/PD series pumps to benefit customers who need automatic torque limiting for their mobile and industrial applications. This allows the use of smaller prime movers, resulting in more efficient use of fuel or electricity.

“The torque limiter adjusts flow in the circuit to keep the prime mover from stalling under heavy loads,” said Peter Medins, marketing product manager, Parker Hannifin Corporation, Hydraulic Pump Division. “A good analogy is downshifting a heavy truck that’s climbing a long grade. The engine puts out the same horsepower, but the truck simply goes slower as the grade increases.

“The benefit in a hydraulic system is that you can reduce the maximum horsepower available and still handle the same load without stalling. This capability is very significant in the mobile and industrial applications our compact P1/PD pumps are designed for.”

To accomplish this, the torque limiter control monitors both pressure and displacement as measured by the pump’s hanger angle. It is a single spring unit that works with the Parker compensator, a ventable pressure limiter or a load sensing or remote venting circuit.

As pressure rises, flow is reduced according to the zero adjustment spring rate of the torque limiter. When pressure has risen to its full value, the compensator assumes control. The torque limiter normally functions down to 20% of corner horsepower, but lower adjustments are possible at the expense of peak pressure.

Parker's optional torque limiter rounds out a selection of hydromechanical controls available for P1/PD series pumps and is available in five configurations:

- Load sensing
- Pilot operated pressure limiter with mechanical adjustment and vent port
- Pilot operated pressure limiter with mech. adj. and vent port with ISO4401 interface & shipping cover
- Pilot operated pressure limiter with mech. adj. and vent port with electrical adjustment 12 VDC
- Pilot operated pressure limiter with mech. adj. and vent port with electrical adjustment 24 VDC

Parker P1/PD series medium pressure (280 bar/4,060 psi), variable displacement, axial piston pumps are design-optimized for open circuit mobile equipment (P1) and industrial applications (PD). The pumps – rated for continuous operation at 2,600 rpm – feature a compact, round housing that is both smaller and quieter than conventional pumps with comparable capabilities. Standard options include a full power through drive, a choice of SAE and ISO mounting flanges and ports, end or side inlet and outlet ports, and case drain ports for horizontal, vertical or shaft-up mounting.

About Parker Hannifin's Hydraulic Pump Division

The Hydraulic Pump Division was formed in 2004 when Parker Hannifin enlarged its significant piston pump business with the acquisition of Denison Hydraulics. The division is a leading worldwide manufacturer of hydraulic components and systems for earthmoving, drilling and construction vehicles; for mining equipment; for pulp and paper, chemical and other processing equipment; for ships and ordnance equipment; and for such in-plant machines as machine tools, plastic molding, die casters and stamping presses.

With annual sales exceeding \$12 billion, Parker Hannifin is the world's leading diversified manufacturer of motion and control technologies and systems, providing precision-engineered solutions for a wide variety of commercial, mobile, industrial and aerospace markets. The company employs approximately 62,000 people in 48 countries around the world. Parker has increased its annual dividends paid to shareholders for 52 consecutive years, among the top five longest-running dividend-increase records in the S&P 500 index. For more

information, visit the company's web site at <http://www.parker.com>, or its investor information site at <http://www.phstock.com>.

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