Parker Launches FM80 Fuel Regulation Module for Medium- to Heavy-Duty Vehicles with 5- to 12-Liter Engines

New Parker CNG Product Launched at 2015 Alternative Clean Transportation (ACT) Expo

DALLAS, TX, MAY 6, 2015 – Parker Hannifin Corporation (NYSE: PH), the global leader in motion and control technologies, introduces the FM80 Fuel Regulation Module, the industry’s only fully integrated CNG (compressed natural gas) flow control and regulation system for medium- and heavy-duty vehicles with 5- to 12-liter engines. Parker’s advanced FM80 withstands extreme variations in temperature, flow, vibration, supply pressure, and gas composition, setting a new standard in CNG fuel handling.

Most current gas handling systems are typically comprised of a rubber-like diaphragm regulator, filter, sensors and solenoid plumbed together with a multitude of fittings. Unlike current systems, Parker’s FM80 features an advanced FM80 metal piston-style regulator, coalescent filters, pressure sensors, a lock-off solenoid valve, heat exchanger, and low-pressure relief valve, all in one compact body. Other components to complete the fully customizable, integrated system include choice of Parker’s best-in-class hoses, fittings, seals, manual shut-off valve, check valves, receptacles, and nozzles. The system offers customizable levels of integration and more configuration options than comparable products. The complete CNG fuel system exceeds industry standards for leakage and safety. It has been tested on a variety of engines and meets the flow and regulation specifications of all leading OEMs with CNG options.

The FM80 is being launched by Parker’s Veriflo Division, well known in the industry for its wide range of robust and reliable regulators, at a press conference on May 6 at the 2015 Alternative Clean Transportation (ACT) Expo in Dallas, Texas (Parker Booth #537).

According to Madhukar Puniani, Business Development Manager (Natural Gas Systems), Parker Veriflo Division, “Aside from being the only complete system solution on the market, the Parker FM80 Fuel Regulation Module offers several breakthrough features to improve performance and vehicle uptime. Incorporation of a larger oil sump means longer times between filter drains, helping increase driver productivity and asset utilization. Innovative technology prevents freezing problems in the winter and eliminates leakage of gas into coolant from wear of soft diaphragms and seals over time.”

The FM80 was engineered for medium- to heavy-duty vehicles like delivery and day cab trucks, cement trucks, school and transit buses, and waste refuse/recycling vehicles. Optimized for
advanced fuel handling performance in 5- to 12-liter engines, Veriflo’s piston-style regulator design offers stable pressure delivery and control of CNG throughout the full range of extreme engine and environmental operating conditions. Integrated internal regulator components, with fewer connections, work together to eliminate fuel line failures due to freezing, dampen flow-induced vibration, reduce drop at high flow, and extend cycle life. The manifold design of the regulator system reduces the chance of fuel line pressure increase due to reduced volume of fuel between the solenoid valve and regulator seals. In addition to the FM80, Parker offers multiple fuel module options for system integrators and OEMs.

The FM80 is designed to achieve the highest nominal flow rate (175 lb/hr / 80 kg/hr) in the industry and the lowest low-pressure operating parameter (250 psig), which increases the usable range of CNG vehicles by a critical 3-5 percent. Other key features and advantages include:

- integrated heating circuit that uses heated radiator fluid to condition the gas before it enters the engine, offering improved reliability at low temperatures and eliminating fuel line failures due to freezing,
- good response to power demand for better drivability,
- well-dampened piston that reduces flow-induced vibration,
- reduced pressure drop
- constrained motion poppet design eliminates lateral loads and seat wear,
- thermal shielding of internal components with PTFE seals isolates gas flow, allowing continuous operation even in extreme -40°F to +248°F (-40°C to +120°C) ambients,
- optional boost pressure augmentation for optimized outlet pressure and performance of turbocharged engines, and
- compact size, offering maximum efficiency in a small space.

According to Tamara Horne, General Manager of Parker Veriflo Division, “As a global company, Parker is committed to providing cutting-edge technologies to reduce the world’s dependence on diesel fuel, which is widely used in medium- and heavy-duty fleet and industrial vehicles. Natural gas is cleaner, more economical, and less toxic to the air and environment than diesel. Parker is proud to be the first manufacturer to offer a fully integrated, high-performance CNG fuel management system in the new Parker FM80 Fuel Regulation Module. It’s the ideal system when performance and productivity of your fleet is critical to your business.”

Parker leads the way in the design and manufacture of multi-technology systems, subsystems, and components that filter, regulate, control, and convey CNG. Parker Veriflo also offers the industry’s best fleet dispensing solutions for high-flow, high-cycle CNG applications.

For more information regarding the Parker FM80 Fuel Regulation Module, as well as other alternative fuel solutions, visit http://solutions.parker.com/alternativefuels or contact the Veriflo Division at 510-412-1100 or ngv@parker.com.

**About Parker Hannifin’s Veriflo Division/Instrumentation Group:** Veriflo is a leading manufacturer of precision diaphragm and bulk gas valves, regulators, and flow control components for the control and application of liquids and gases.

**About Parker Hannifin:** With annual sales of $13 billion in fiscal year 2014, 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 mobile, industrial and aerospace markets. The company employs approximately 57,500 people in 50 countries around the world. Parker has increased its annual dividends paid to shareholders for 58 consecutive fiscal years, among the top five longest-running dividend-increase records in the S&P 500 index. For more information, visit the company's website at www.parker.com, or its investor information website at www.phstock.com.

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