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## **Parker Commercializes Unique Hydraulic Hybrid System for Delivery Vehicles**

**- Freightliner Custom Chassis commitment for 20 series hydraulic hybrid systems for delivery vehicles represents milestone in technology's commercialization**

**- Parker technology has demonstrated 50 to 70 percent increase in miles per gallon**

CLEVELAND, Oct. 16 /PRNewswire-FirstCall/ -- Parker Hannifin Corporation (NYSE: PH), the global leader in motion and control technologies, today announced initial commercial commitment for its new series hydraulic hybrid system, which is designed to completely replace the traditional drive train on delivery vehicles and has yielded significantly increased fuel efficiency and reduced carbon emissions. The commitment came as part of a grant under the United States Department of Energy's Clean Cities program and was funded through the American Recovery and Reinvestment Act.

Daimler Trucks North America LLC (DTNA) spearheaded the submittal of these winning applications which will support the purchase of 638 hybrid and alternative fuel vehicles. Parker is the only supplier of the hydraulic hybrid systems for the vehicles. The systems will be purchased by DTNA subsidiary, Freightliner Custom Chassis Corporation and incorporated into delivery vehicle models intended for use by United Parcel Service (UPS).

"This is a significant development in the advancement of this new hydraulic hybrid system, one of several technology platforms on which we are currently working," said Don Washkewicz, Chairman, CEO and President of Parker. "The commercial application of our technology is recognition that our system has demonstrated several unique advantages over electric hybrids including significantly better fuel efficiency. Importantly, with products from Parker divisions across geographies, this system is a shining example of our ability to leverage our existing technologies to build complete systems and address some of the most pressing and current engineering challenges of our time, such as the need to decrease energy consumption and reduce our environmental impact."

Field testing of the system during the past year has indicated that the hydraulic system is capable of generating as much as a 50 to 70 percent increase in miles per gallon in stop-and-go applications when compared with traditional diesel powered vehicles that have automatic transmissions. Prior to field testing, the system was validated for fuel efficiency by the United States Environmental Protection Agency at its National Vehicle and Fuel Emissions Laboratory in Ann Arbor, Michigan.

The series hydraulic hybrid system is unique in that the engine is not connected to the rear wheels of the vehicle. This de-coupling of the engine from the drive wheels offers several advantages including: the ability to recover and store energy from braking, thus reducing brake wear; an engine management system that optimizes the vehicle's engine for reduced fuel consumption; drive the vehicle with the engine off, significantly reducing carbon emissions in depots and at delivery points, contributing to reduced fuel consumption.

"We are on the cutting edge of advancements in series hydraulic hybrid technology working in close partnership with customers such as Freightliner Customer Chassis Corporation to commercialize new systems," commented Dr. Joe Kovach, Group Vice President of Technology and Innovation for Parker's Hydraulics Group. "We believe the series hydraulic hybrid technology has application not only in delivery vehicles, but also for yard hostlers and city buses. Additionally, our advanced series hydraulic hybrid system, called RunWise®, is currently being field tested in more demanding applications such as with refuse vehicles. This is a technology that holds great promise as a contributor to reduced environmental impact and increased fuel efficiency."

The Parker series hydraulic hybrid system stores energy recovered during the braking process in an advanced accumulator. The energy stored in the accumulator is then used to accelerate the vehicle on the next launch. Once that energy is depleted, the engine is restarted. Unlike electric-hybrid systems which store energy in a battery, the series hydraulic hybrid can recover and reuse as much as 70 percent of the energy used from braking that otherwise would be lost energy. By comparison, traditional electric systems can recover only 20 to 25 percent of brake energy. The system is one of a growing range of technologies Parker is developing to address energy-related challenges, with systems in development for renewable energy applications such as wind, solar and wave; and in making traditional energy more efficient.

Freightliner Custom Chassis Corporation manufactures premium chassis for the motor home, delivery walk-in van, and school bus and shuttle bus markets. Freightliner Custom Chassis Corporation is a subsidiary of Daimler Trucks North America LLC, a Daimler company.

With annual sales exceeding \$10 billion in fiscal year 2009, 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 52,000 people in 48 countries around the world. Parker has increased its annual dividends paid to shareholders for 53 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>.

### *Forward-Looking Statements*

Forward-looking statements contained in this and other written and oral reports are made based on known events and circumstances at the time of release, and as such, are subject in the future to unforeseen uncertainties and risks. All statements regarding future performance, earnings projections, events or developments are forward-looking statements. It is possible that the future performance and earnings projections of the company and individual segments may differ materially from current expectations, depending on economic

conditions within its mobile, industrial and aerospace markets, and the company's ability to maintain and achieve anticipated benefits associated with announced realignment activities, strategic initiatives to improve operating margins, actions taken to combat the effects of the current recession, and growth, innovation and global diversification initiatives. A change in economic conditions in individual markets may have a particularly volatile effect on segment results. Among the other factors which may affect future performance are: changes in business relationships with and purchases by or from major customers or suppliers, including delays or cancellations in shipments, disputes regarding contract terms or significant changes in financial condition; uncertainties surrounding timing, successful completion or integration of acquisitions; threats associated with and efforts to combat terrorism; uncertainties surrounding the ultimate resolution of outstanding legal proceedings, including the outcome of any appeals; competitive market conditions and resulting effects on sales and pricing; increases in raw material costs that cannot be recovered in product pricing; the company's ability to manage costs related to employee retirement and health care benefits and insurance; and global economic factors, including manufacturing activity, air travel trends, currency exchange rates, difficulties entering new markets and general economic conditions such as inflation, deflation, interest rates and credit availability. The company makes these statements as of the date of this disclosure, and undertakes no obligation to update them.

SOURCE Parker Hannifin Corporation