



"When Fluid Quality Matters"

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FOR IMMEDIATE RELEASE

Flowtonics™ Introduces Oil Quality Sensor for Fleet Management Applications

Flowtonics to market fluid quality sensor for predictive health management of vehicle fleets

Grand Blanc, MI, and Rochester, NY, May 1, 2007 – Flowtonics LLC announces application of its fluid quality sensing technologies for optimizing health and maintenance of vehicle fleets.

The Flowtonics state-of-the-art fluid quality sensor with onboard processing directly monitors engine oil quality in real-time. First generation oil quality sensors, developed partially with funding from the US Navy, are currently being field tested in gasoline and diesel engine vehicles and stationary biogas generator applications.

Flowtonics' fluid quality sensor provides actionable information on oil health which can be input directly into the vehicle architecture (engine code and warning light through J1939/CANBUS) or integrated with the vehicle fleets' telematics system, such as the onboard rugged mobile computer solution offered by Azentek™. This allows near real-time communications not only on, but also off the vehicle – for example to fleet maintenance center logistics planning systems.

The use of oil quality sensor systems by vehicle fleet managers allows optimization of maintenance scheduling and parts logistics based on "prognostics" (upcoming maintenance needs) which could result in a significant cost and time savings when compared with traditional time or mileage based methods. Prognostic Health Management (<http://www.impact-tek.com/About/News/Detail.aspx?id=76>) enabled by smart sensing technology is an emerging concept that enables elimination of unnecessary maintenance, while simultaneously decreasing unplanned maintenance issues. This leads to decreased routine maintenance costs, leveled shop loading, higher vehicle uptime and higher reliability.

In addition to fleet maintenance financial benefits, oil quality sensing can be a key technology that companies can employ in pursuing corporate environmental "Green" strategies. Not only can the sensor promote reduction in petroleum product usage and waste by eliminating unnecessary oil changes, it has the potential to be utilized in overall health monitoring systems to provide early on-line diagnosis of emerging engine combustion problems such as excessive blow-by. Catching combustion performance issues early can reduce tailpipe pollution (both particulates and hydrocarbons) and keep vehicle fuel economy near its peak value.

The Flowtonics sensor fuses the results from several complementary measurement technologies into a comprehensive diagnostic assessment of the oil. The key measurement is a patented broadband electrochemical impedance interrogation technology that tracks changes in an array of fluid quality parameters.

Flowtonics is actively seeking large fleet owners and OEM partners to develop application-specific versions of the sensor based on the partner's technical and market requirements.

Second-generation applications of the technology are expected to include other critical machinery fluids, such as transmission fluids, gearbox lubricants, and fuels. Sensors are being developed for a variety of markets including industrial heavy equipment, marine, agricultural equipment, and the oil industry -- whenever and wherever fluid quality matters.

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FQS-3 First Generation Fluid Quality Sensor – Currently Undergoing Field Trials



High Volume Production Version Concept