



## Press Release

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### **FUEL SYSTEM HOSES AND FILTERS ARE KEY TO RELIABILITY AND PERFORMANCE, MEETING EVAPORATIVE EMISSIONS STANDARDS**

#### **Marine Industry Leader Teleflex Helps Boat Builders Comply While Protecting Critical Engine Parts**

Litchfield, IL – If the engine is the heart of today’s modern powerboat, then the various fuel lines, hoses and filters can be looked at as the vessel’s circulatory system. Carrying this boat-human analogy a step further, it’s easy to see how a failure in one of these critical “arteries” can have disastrous effects ranging from leaks and dangerous environmental emissions to serious engine damage.

Sierra is aware of this critical link and has built its reputation on providing the marine industry with hoses and filters engineered to meet the challenging conditions onboard a vessel — as well as increasingly stringent environmental regulations. The expanding use of gasoline/ethanol blends also presents boat manufacturers and owners with special challenges, and Sierra has stepped up with new products to preserve engine performance and fuel system integrity in the face of current E10 (and proposed E15) fuels.

Today’s high-performance outboard and inboard engines are very sensitive to fuel flow interruptions, which makes removal of water and contaminants all the more important. At the same time, the boating industry has to contend with the challenges of ethanol blended fuels and meeting ever-increasing emissions standards.

While these fuel system components are easy for boaters to overlook, Sierra is constantly developing new products and technologies to ensure environmental compliance, engine system protection and proper boat performance:



**Fuel Filters** — The performance of today’s high-tech boat engines depends on a steady, reliable flow of contaminant-free fuel. “Boaters face kind of a ‘perfect storm’ when it comes to high-tech engines and the addition of ethanol to our fuel supply,” said Bill Walker, assistant product manager in charge of fuel, ignition and internal engine parts. “Fuel/water separator filters may not be the most glamorous part of a boat, but they’re the first line of defense and offer extremely economical protection,” added Walker.

Sierra leads in the industry in the development of 10-micron fuel filters. These filters eliminate 10 micron and larger sized contaminants at over 90% efficiency. Sierra’s cartridge-style water separating fuel filters can provide

the same 10-micron particulate filtration while removing water contamination from fuel before it reaches important engine components. Water contamination can cause serious engine damage. This problem has become increasingly prevalent with today's gasoline/ethanol fuel blends. Because of its hygroscopic nature, ethanol in gasoline is known to absorb water from the air in the fuel tank during prolonged boat storage. The ability of the filter to detect water in the fuel and remove it to the filter's drainable bowl – before it reaches the engine – makes this an important tool in protecting fuel system integrity and engine life.

Ethanol, like alcohol, also has a cleansing nature and loosens more particulates from the fuel tank walls than regular gasoline, further increasing the importance of quality 10-micron filtration. With increasing environmental and fuel economy standards in the U.S., it's likely that ethanol fuel blending will only increase in the future.

**Fuel Lines** — A vessel's fuel feed, fuel fill and fuel vent hoses must also meet demanding performance and environmental standards. Shields fuel system hoses are specifically designed for the challenging marine environment, with reinforced temperature, fire and weather resistant construction and secure coupling insertion.

"Fuel hoses are purpose-built for very specific applications," said Jim Lombardi, product manager for Shields hose. "We've made certain that Shields fuel hoses fully comply with very strict regulations and provide the performance and durability today's boaters demand."



**Fuel Feed Lines** — Shields has developed a range of very low permeation fuel hoses designed for use with ethanol blended gasoline as well as diesel and bio-diesel blends. In fact, Shields newest fuel feed hoses are designed to comply with SAE J1527 Type A1-15 standards specifically developed for marine applications. Hoses meeting this standard are engineered with an embedded plastic barrier to protect against the effects of ethanol in the fuel, as well as to limit vapor permeation. They comply not only with U.S. Coast Guard safety requirements for pleasure boats, but also NMMA, EPA and proposed CARB (California Air Resources Board) environmental requirements.

**Fuel Fill/Vent Hoses** — The same attention to construction and environmental compliance must also extend to the hoses used to fill and vent the vessel's fuel tank. Shields offers the boating industry fuel fill and vent hoses engineered to SAE J1527 Type A2 standards and designed to stand up to ethanol blended (as well as diesel) fuels. Shields' Fuel Fill Hose is constructed with an embedded wire helix to prevent kinking and special compounds to resist abrasion. Similar Fuel Vent Hose also meets SAE J1527 Type A2 and US Coast Guard safety standards, and resists the damaging effects of ethanol blended fuels.

With the continuing changes to the nation's fuel supply, managing a marine engine's fuel system is more important than ever. With E10 fuel, and the possibility of E15 fuel, new hoses and filters are necessary to counter the effects of increased ethanol in gasoline, and to comply with increasingly strict environmental controls. While new boats should be fitted out with compliant hoses and filters, older boats may be in need of an upgrade. Shields hoses and Sierra filters are designed to meet the most stringent industry and governmental standards and are backed by Sierra's industry leading warranty, giving boaters confidence in the integrity of their boats "circulation system" before leaving the dock.

To learn more about Sierra Engine and Drive Parts and Shields Hoses, contact: Teleflex Marine at One Sierra Place, Litchfield, IL 62056 • Telephone: (217) 324-9400 • Or visit [www.teleflexmarine.com](http://www.teleflexmarine.com).

## **About Teleflex Incorporated**

Teleflex Incorporated (NYSE:TFX) is a diversified company with annual revenues of \$2.5 billion. Teleflex designs, manufactures and distributes quality-engineered products and services for healthcare, aerospace, marine, and industrial markets worldwide. Headquartered in Limerick, PA., with operations in 24 countries, Teleflex employs more than 14,000 people worldwide who focus on providing innovative solutions for customers. Additional information about Teleflex can be obtained from the Company's website at [www.teleflex.com](http://www.teleflex.com).