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FOR IMMEDIATE RELEASE

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LORD TO SHARE STEER-BY-WIRE SYSTEMS EXPERTISE AT ELECTRIC AND HYBRID MARINE WORLD EXPO

(Cary, NC – Jan. 10, 2016) — LORD Corporation — a pioneer of Tactile Feedback Device (TFD®) steering units for Steer-by-Wire (SbW) systems — will be presenting at the Electric and Hybrid Marine World Expo Florida's Open Technology Forum, to be held Jan. 16-18 at the West Hall of the Tampa Convention Center.

Askari Badre-Alam, Ph.D., electromechanical technology manager, LORD Corporation, will present "Electronic Helm Units for Marine Steer-by-Wire Systems," at 2:45 p.m. on Jan. 18 at the Forum. He will discuss how the company's TFD leverages its patented magnetically responsive (MR) material to enhance the boating experience by providing tunable tactile feedback that enables the operator to feel connected to the water with a fully electronic steering helm.

When exposed to a magnetic field, MR material changes rheology instantaneously and reversibly from a free-flowing liquid to a semi-solid in milliseconds, permitting real-time variable control of steering resistance. A TFD steering unit is a key component of fully electric and electro-hydraulic SbW systems. Torque feedback to the operator is generated through LORD Corporation's proprietary "Direct Shear Mode" design in which a rotor attached to a shaft shears MR material against a fixed stator.

"This is a growing industry and we are excited to leverage our technology portfolio to make products that improve safety, increase reliability and enhance operator/owner experience," said Badre-Alam. "These devices provide an integrated solution that combines steering angle sensing with tactile feedback."

Badre-Alam noted that the onboard control algorithms take advantage of the fast response time of MR material to provide timely feedback necessary to stay in control of the craft in a safe manner. The feel of this device beats any other device in the marketplace, he said, which includes no noise, no stickiness or stick-slip while offering amazing resolution and bandwidth of brake torque.

“The steering response can be programmed for partial or multiple rotations, to be boat speed sensitive, and to generate end-stop control, position detents and more,” said Badre-Alam.

“Integration of LORD TFD with other devices over CAN bus such as GPS and vision systems can provide sophisticated hybrid steering control.”

The patented MR advanced technology Badre-Alam will be speaking about played a role in an integrated marine solution honored at the 2016 International Boatbuilders Exhibition and Conference (IBEX) in Tampa, Fla.

In addition to their SbW expertise, LORD also specializes in developing world-class thermal management solutions for demanding applications. Product lines include potting and encapsulation materials, adhesives, gap fillers, gels and greases, and these solutions span various chemistries — silicones, epoxies, acrylics and urethanes. LORD will also exhibit the following in Booth No. 5020:

- **SbW Demo:** Test drive a programmable TFD leveraging MR material
- **Battery Packs:** Enable proper heat flow during charge/discharge cycles
- **Motors:** Decrease operating temperature or increase power output
- **Chargers:** Ensure magnetics remain cool
- **Power Electronics:** Provide high thermal conductivity at low viscosity to remove hot spots

For additional information, please contact LORD at +1 877 ASK LORD (275 5673), email customer.support@lord.com, or <http://www.lord.com/products-and-solutions/steering-units>.

About LORD Corporation

LORD Corporation is a diversified technology and manufacturing company developing highly reliable adhesives, coatings, motion management devices, and sensing technologies that significantly reduce risk and improve product performance. For more than 90 years, LORD has worked in collaboration with our customers to provide innovative oil and gas, aerospace, defense, automotive and industrial solutions. With world headquarters in Cary, N.C., LORD has

approximately 3,100 employees in 26 countries and operates 19 manufacturing facilities and 10 R&D centers worldwide. LORD actively promotes STEM education and many other community engagement initiatives. For more information, visit www.lord.com.

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