

Johnson Controls and Lawrence Technological University go beyond the battery Partnership advances vehicle energy storage research

SOUTHFIELD, Mich., May 7, 2015 /PRNewswire/ -- Johnson Controls is partnering with Lawrence Technological University (LTU) to test and develop advanced battery systems in vehicles aimed at helping automakers meet increasing fuel economy and emissions standards.

The world's leading supplier of automotive batteries and one of the nation's top engineering schools will unveil the new Johnson Controls Vehicle Engineering Systems Lab, including a dynamometer, during a ceremony in the hub of America's auto industry May 8.

A dynamometer is used to test vehicles in different controlled driving environments and accelerates understanding of how best to manage battery energy and power transfer in the vehicle.

"The work we are doing with LTU is important because we can develop, optimize and validate battery systems inside the complete vehicle environment to meet our customers' future needs," said MaryAnn Wright, vice president of engineering and product development for Johnson Controls Power Solutions. "Johnson Controls is constantly investing in its applied research and development capabilities to stay ahead of the evolving needs of the auto industry and to remain a global leader in the battery business."

Johnson Controls, a global multi-industrial company, will use the lab to test its recently announced [12-volt Lithium-ion battery](#) in its prototype Advanced Start-Stop vehicle. The technology can improve fuel economy and emissions by up to 8 percent. The company's [48-volt](#) Micro Hybrid system, which gets up to 15 percent fuel economy, is also part of the research and development with LTU.

The [partnership](#), which began in 2014, also focuses on developing the next generation of engineers by involving them in the research projects and teaming them with LTU faculty and Johnson Controls technical experts. "These partnerships provide a strong talent pipeline for scientists and engineers interested in careers that will shape the way we drive our vehicles and use natural resources," Wright said.

"The partnership with Johnson Controls is part of a broader effort by Lawrence Tech to respond proactively with innovative academic research programs to the needs of our corporate partners and students," said Virinder Moudgil, president of Lawrence Technological University. "We are helping these corporate partners develop market-based solutions while providing students with real-world experiences and skills."

About Johnson Controls

Johnson Controls is a global diversified technology and industrial leader serving customers in more than 150 countries. Our 170,000 employees create quality products, services and solutions to optimize energy and operational efficiencies of buildings; lead-acid automotive batteries and advanced batteries for hybrid and electric vehicles; and interior systems for automobiles. Our commitment to sustainability dates back to our roots in 1885, with the invention of the first electric room thermostat. Through our growth strategies and by increasing market share we are committed to delivering value to shareholders and making our customers successful. In 2015, Corporate Responsibility Magazine recognized Johnson Controls as the #14 company in its annual "100 Best Corporate Citizens" list. For additional

information, please visit <http://www.johnsoncontrols.com> or follow @johnsoncontrols on Twitter.

About Power Solutions

Johnson Controls Power Solutions is the world's largest manufacturer of automotive batteries, supplying approximately 140 million every year to automakers and aftermarket retailers. Our full range of lead-acid and Lithium-ion battery technology powers nearly every type of vehicle for our customers- including conventional, Start-Stop, Advanced Start-Stop, Micro Hybrid, hybrid and electric. Johnson Controls' recycling system has helped make automotive batteries the most recycled consumer product in the world. Globally, 15,000 employees develop, manufacture, distribute and recycle batteries at more than 50 locations. For more information, please visit <http://www.JohnsonControls.com/PowerSolutions> or follow [@JCI_BatteryBeat](https://twitter.com/JCI_BatteryBeat) on Twitter.

About Lawrence Technological University

Lawrence Technological University, www.ltu.edu, is a private university founded in 1932 that offers more than 100 programs through the doctoral level in its Colleges of Architecture and Design, Arts and Sciences, Engineering, and Management. PayScale lists Lawrence Tech among the nation's top 100 universities for the salaries of its graduates, and *U.S. News and World Report* lists it in the top tier of best Midwestern universities. Students benefit from small class sizes and a real-world, hands-on, "theory and practice" education with an emphasis on leadership. Activities on Lawrence Tech's 102-acre campus include over 60 student organizations and NAIA varsity sports.

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