



PRESS RELEASE

Mack Trucks unveils fully electric refuse demonstration model

Mack Trucks unveiled its highly anticipated Mack® LR battery electric vehicle (BEV) at WasteExpo 2019. Combining the refuse industry-leading design of the Mack LR model with a fully electric Mack drivetrain, the demonstration model will begin real-world testing in 2020 in the demanding operations of the New York City Department of Sanitation (DSNY).

The Mack LR BEV is the latest example of Mack's leadership within the refuse and recycling industry," said Jonathan Randall, Mack Trucks senior vice president, North American sales and marketing. "Built on our decades of experience in powertrain innovation, the electric LR delivers a powerful yet quiet, zero-emission solution designed to tackle one of the most demanding applications in one of the largest cities in the world."

The Mack LR BEV is powered by Mack's integrated electric powertrain consisting of two 130-kW motors producing a combined 496 peak horsepower and 4,051 lb.-ft. of torque available from zero RPM. Power is sent through a two-speed Mack Powershift transmission and put to the ground by Mack's proprietary S522R 52,000-lb. rear axles. The Mack LR BEV features a copper-colored Bulldog hood ornament, signifying that it's an electric vehicle.

All of the LR BEV's accessories, including the hydraulic systems for the Heil DuraPack 5000 body, are electrically driven through 12V, 24V and 600V circuits. Four NMC lithium-ion batteries (Lithium Nickel Manganese Cobalt Oxide) are charged via a 150kW, SAE J1772-compliant charging system.

As one of Mack's largest customers, DSNY was an ideal choice to test the first LR BEV model in a real-world application. DSNY is the world's largest sanitation department, with its 10,000 employees collecting more than 12,000 tons of refuse and recyclables each day. DSNY is also a sustainability innovator and has initiated several programs designed to reduce waste sent to landfills, as well as cut emissions.

"New York City, and DSNY in particular, is a world leader when it comes to testing the latest technologies to help us reduce our environmental footprint," said New York City DSNY Deputy Commissioner Rocky DiRico. "We're proud to be the first Mack customer to test this exciting new technology, and we look forward to continuing to work with Mack throughout this project."

Even as electromobility technology and supporting infrastructure continues to develop, refuse and recycling collection represents an ideal application for BEVs because of the potential to deliver the most value to customers. Collection vehicles operate on predetermined routes and return home



every off shift, helping eliminate concerns about range and finding a location to charge. The frequent starts and stops, which can occur thousands of times per shift, also provide a significant regenerative braking opportunity to recapture energy.

Fully electric trucks like the Mack LR BEV provide a number of benefits, including zero emissions and the potential for improved environmental sustainability. In addition, fully electric trucks produce significantly less noise, enabling nighttime operation, a particularly attractive option for refuse operators in urban environments.

*For further information, please contact: Christopher Heffner, manager Public Relations Mack Trucks. Phone: +1 336-662-1615
christopher.heffner@macktrucks.com*

For more information about Mack Truck visit: www.macktrucks.com

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