



PRESS RELEASE

Komatsu achieves a milestone for autonomous driving with battery-powered dump truck with electric drive

May 22, 2025 -- Building on its history of innovation in autonomous mining, Komatsu has achieved a significant milestone: an autonomous electric-powered dump truck connected to a dynamic overhead line.

Komatsu's Trolley Assist system is a solution that helps operations reduce carbon emissions, extend engine life and pave the way to a zero-emission future. By connecting the dump trucks to an overhead line while traveling uphill, the system delivers electrical power where it is needed most. This improves energy efficiency and allows the dump trucks to travel uphill faster compared to standard diesel models. Integrating this system with Komatsu's FrontRunner Autonomous Haulage System creates new opportunities for mining automation, enabling further fuel savings and productivity gains.

This is the first time in the history of the mining industry that power has been transferred to a moving, autonomously powered dump truck via a trolley system. This achievement is a key step in Komatsu's commitment to helping mining customers reduce emissions and increase productivity through advanced electrification and autonomous solutions.

"This milestone demonstrates the strength of our commitment to enhancing our integrated technology strategy that combines autonomous transportation with dynamic power transfer and trolley capabilities," said Martin Cavassa, Director, Global Business Development Autonomous Systems, Komatsu. "The ability to seamlessly transfer power to a moving dump truck that operates without a driver is a critical success in our roadmap to decarbonize mining and provides the path for autonomous management of battery-powered dump trucks."

Komatsu launched FrontRunner in 2008, pioneering the world's first commercial application of autonomous material handling. Today, Komatsu customers have transported more than 10 billion tons of material with a fleet of more than 875 autonomous transport vehicles in operation worldwide. This amount of material has been moved primarily thanks to Komatsu's autonomous transport solution, which uses top-of-the-line dump trucks such as the 980E with a payload of 363 tons.

This breakthrough underscores Komatsu's commitment to delivering integrated solutions that create value for our customers. By combining the proven reliability of electric-powered dump trucks with the autonomous capabilities of FrontRunner, Komatsu continues to provide its mining customers with solutions to meet their productivity goals, reduce total cost of ownership and meet the increasing global demand for critical minerals in a more efficient and responsible manner.

About Komatsu

Komatsu develops and supplies technology, equipment and services for the construction, mining, forklift, industrial and forestry markets. For more than a century, the company has been creating value for its customers through manufacturing and technology innovation, working with others to enable a sustainable future where people, businesses and the planet thrive together. Industries around the world use Komatsu solutions to develop modern infrastructure, extract minerals, manage forests and manufacture consumer goods. The company's global service and dealer network supports customers' work to improve safety, increase productivity and optimize performance.

For more information, please visit: www.komatsu.eu

www.kuhn.at

