



Hybrids Enter Mining: Cummins, Komatsu, and Wabtec Set New Course

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Image: Komatsu

The global mining industry is under increasing pressure to cut emissions while maintaining reliability in some of the toughest operating environments on earth. A new partnership between **Cummins**, **Komatsu**, and **Wabtec** signals that hybrids may become the next decisive step in this transition.

A Three-Way Alliance

In a memorandum of understanding announced this month, Cummins and Komatsu committed to co-develop hybrid powertrains for large surface haulage trucks. Komatsu has also invited Wabtec, its established drive system partner, to contribute expertise on electrified drivetrains and power optimization. Together, the three companies aim to accelerate the shift from pure diesel power toward hybrid mining fleets.

Why Hybrids, Why Now?

Mining haul trucks are among the most energy-intensive machines in operation, consuming vast amounts of fuel and generating significant emissions. Full electrification remains a long-term goal, but for sites with extreme loads, long duty cycles, or remote operations, hybrids represent a practical and near-term solution. By harvesting braking energy and shortening cycle times, the technology promises meaningful fuel savings and productivity gains.

“We are thrilled to partner with Komatsu once again to bring the latest advancements to the mining sector,” said Gbile Adewunmi, Vice President of Industrial Markets, Power Systems at Cummins. “We have a robust team of Cummins and former First Mode experts dedicated to hybrid development and optimization, and now collaborating with Komatsu, we can bring miners the flexibility and confidence they need to decarbonize and improve total cost of operations.”

Retrofit Kits as a First Step

Rather than waiting for entire new fleets, the companies see retrofit kits as a way to unlock immediate progress. Pilot hybrid systems will be deployed this year, supported by expertise Cummins gained through its acquisition of First Mode assets in February 2025.

“Commercializing hybrid retrofit kits is a key first step,” noted Molly Puga, General Manager of First Mode. “With the pace of development already underway now accelerated by this collaborative partnership, we’re confident in delivering hybrid products at scale well in advance of 2030. The initial First Mode retrofit kit pilot will go into the market in the coming months, where we expect to see double-digit fuel savings in mining operations.”

Meeting Today’s Demands, Preparing for Tomorrow

For Komatsu, the collaboration reflects a dual commitment: helping customers meet immediate operational needs while aligning with long-term climate goals.

“This collaboration with Cummins is an important step in advancing practical decarbonization solutions,” said Dan Funcannon, Senior Vice

President of Komatsu's Surface Haulage Business Unit. "Together, we're helping bridge current operational needs with future low-carbon goals to support our customers' sustainability efforts."

The Bigger Picture

Both companies have already trialed decarbonization solutions, such as dual-fuel trucks developed with Vale in 2024. Komatsu has committed to achieving carbon neutrality across products and production by 2050, while Cummins pursues its *Destination Zero* strategy to support customers through the energy transition.

Hybrid Alliance Perspective

At Hybrid Alliance, we view this partnership as another clear signal that hybrids are not a fallback — they are a forward-looking strategy. In sectors like mining, where high power demand and remote operations limit the near-term feasibility of full electrification, hybrid systems deliver tangible CO₂ savings, cost benefits, and operational resilience. By leveraging retrofit solutions and modular architectures, industry leaders are demonstrating that hybrids can accelerate decarbonization today while laying the foundation for tomorrow's all-electric future.

Read more: [Cummins und Komatsu arbeiten gemeinsam an einem Plan zur Entwicklung und Einführung von Hybridantrieben für den Bergbau | Cummins Inc.](#)