

# Displayed with Cat<sup>®</sup> Dynamic Energy Transfer system, the Cat<sup>®</sup> 798 AC mining truck at MINExpo 2024 features a refreshed cab and multiple enhancements

- Cat<sup>®</sup> DET powers electric drive system to reduce fuel burn
- Cab refresh improves visibility, controls, air filtration and operator comfort
- Improved payload accuracy and increased speed and throughput of data communication

TUCSON, Ariz., September 21, 2024 – With its 372-tonne (410-ton) nominal rated payload, the Cat<sup>®</sup> 798 AC electric drive trucks deliver the highest standard payload available in its class size, higher speed on grade, easier maintenance and excellent resistance braking performance. The high-altitude arrangement (HAA) 798 AC on display in Caterpillar exhibit #6333 at MINExpo 2024 features a 363-tonne (400-ton) payload, refreshed cab plus the latest performance, maintenance and safety upgrades.

Show attendees will first notice the hardware installed for the new Cat<sup>®</sup> Dynamic Energy Transfer system prototype which can be used to power the 798 AC's electric drive system during operation. This fully Caterpillar-developed system is designed to transfer energy to both diesel electric and battery electric large mining trucks while they are working around a mine site. This allows it to charge a battery electric truck's batteries while the machine is operating, improving operational efficiency and machine uptime.

Cat DET is comprised of a series of integrated elements, including a power module that converts energy from a mine site's power source, an electrified rail system to transmit the energy and a machine system to transfer the energy to the truck's powertrain. The 798 AC truck is positioned with the prototype onboard attachment arm connected to a 73-meter (240-foot) section of the Cat DET rail system.

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New Product Introduction

## Refreshed cab

The cab design on display has a three-piece flat windshield to improve visibility and reduce replacement costs compared to the previous curved, single pane design. The updated heating, ventilating and air conditioning (HVAC) system increases airflow by 30% compared to the previous design, while decreasing blower sound levels. Its cyclonic air precleaner provides high-efficiency filtration levels to improve cabin air quality, and the system allows for the addition of HEPA, ABEK gas and vapor removal, and odor-reducing filters.

Improvements to operator controls include a new trans-hoist system that incorporates both drive and hoist controls in a single lever. Ideally located 254-mm (10-in) displays consolidate machine data, controls, guidance information and applications like Cat MineStar™ for quick reference. The refreshed cab also integrates mounting and electrical to simplify third-party system integration.

## Features and performance

Standard Cat Payload Monitoring System technology delivers accuracy within 3%, with less sensitivity to load placement in the truck bed. Offering better accuracy with overload situations, it also reports carryback measurements to improve payload tracking. Consistent with other Cat mining trucks, the haul road management tool tracks and benchmarks haul road conditions to improve road maintenance and maximize truck lifecycle performance. The ability to correlate trend data to repair records and failure data helps to improve productivity, performance and safety.

All high-altitude AC-drive mining trucks, like the exhibited 798 AC, can now be equipped from the factory Command-ready to streamline integration of Command for hauling for future autonomous operation. The latest controller design improves data communication capability by increasing transfer rates through the serial port in Command mode. Monitoring of tonne-kilometer per hour improves tire health monitoring for better tire management, especially at Command sites. An available health interface module (HIM) provides an interface for third-party collision avoidance/proximity detection, tire monitoring and driver safety systems.

Like all Cat mining trucks, the 798 AC now has braided harnesses and replaces p-clip fasteners with more rugged systems to improve durability. Monitored through onboard diagnostics, the integrated autolube system improves greasing capability, enhances pump reliability and prevents tank overfill and pressurization via auto shutoff. A ground-level reservoir provides easier access for inspection, refill and maintenance. Also available, the solid bar rock ejector improves performance in demanding applications where chain rock ejectors are less effective.



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## **Safety, maintenance and serviceability**

Standard from the factory, a secondary egress ladder shield for the 798 AC protects the operator from engine bay thermal exposure in the event of emergency egress. The updated body and chassis lighting strategy improves reliability and provides better lighting for service and inspection than previous designs, while front-of-machine turn lights increase visibility. Its redesigned engine access door eliminates trip hazards, offers easy ergonomic single-person operation and has up to an 85° open range for access to the engine bay.

Piston steering accumulators replace previous bladder-style accumulators to improve reliability and durability, and the common design across many Cat mining trucks simplifies parts stocking. The 798 AC now offers 1136- or 795-liter-per-minute (300- or 210-gallon-per-minute) fast fill fuel options, and an ultrasonic jet sensor that prevents manual override during filling to save from potential tank damage. A simplified electrical system for the truck improves troubleshooting, circuit protection and overall serviceability.

Increasing reliability, relocation of the auxiliary hoist quick disconnect increases clearance between the hose and tire to prevent tire tread and/or mud accumulation from damaging the hoist cylinder. Complete with dedicated jump-start receptacle, the centralized ground-level control box is conveniently located for battery disconnect, engine shutdown switch, machine lockout, VIMS service port, among other items. An optional synthetic body cable is 40% lighter than the standard steel cable, simplifying single person handling and installation.

## **Reducing emissions**

The diesel-electric design of the 798 AC, as well as all Cat AC-drive trucks, delivers high payload, fast speeds and excellent acceleration, so miners get the most from the fuel burned. Equipping the truck with DET to make use of electric power on certain sections of the haul road provides opportunities to reduce fuel burn even more. To optimize fuel consumption at the mine site, the 798 AC offers a range of engine power options from 2,050 to 3095 kW (2,750 to 4,150 hp). Engines are compatible with diesel blended with lower-carbon intensity fuels like biofuels and renewable fuels, as well as blends with synthetic fuels.

Caterpillar and Cat dealers offer a range of tools to help miners reach their emissions-reduction goals. These include scale studies to help optimize empty machine weight, reduce carryback and ensure maximum payload. Site assessments evaluate a range of aspects at the mine site to increase haul road efficiency for faster cycle times, better productivity, lower maintenance costs and reduce fuel burn per cycle. Cat Reman and Cat Rebuild programs preserve raw materials, conserve energy and reduce emissions.



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The Cat 798 AC is displayed at MINExpo equipped with the Cat High Efficiency (HE) body, which blends a lightweight design and durability for high payload potential and long life.

More information on the 798 AC mining truck can be found by contacting a Cat dealer or visiting [cat.com](https://cat.com). For more information about Cat Financial solutions tailored to meet the mine site's specific needs for equipment acquisition, technology upgrades and maintenance, visit [www.cat.com/catfinancial](https://www.cat.com/catfinancial).

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## NOTE TO EDITORS

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Release Number: 167PR24 — SEPTEMBER 2024

For Release: Worldwide

