

NEW C SERIES ARTICULATED TRUCKS INCREASE PROFIT POTENTIAL WITH IMPROVED CYCLE TIMES, FUEL EFFICIENCY, AUTOMATED SYSTEMS AND EASE OF OPERATION

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The new Cat® 735C, 740C EJ, and 745C articulated trucks build on the proven performance, reliability and durability of their B Series predecessors with significant new features. These include engines that meet U.S. EPA Tier 4 Final/EU Stage IV emission standards, new transmissions with expanded electronic control, automatic traction control, automatic retarder control, hill assist and waiting brake systems, and an optional payload weighing system—all aimed at delivering lower costs per ton by reducing cycle times, saving fuel, and easing the operator's work load.

Rated payload capacities for the new models are 36, 42, and 45.2 tons (32.7, 38, and 41 mt), respectively, with all models replacing their B Series predecessors. The new 745C's 1.7-ton (1.5 mt) capacity increase (compared with the 740B's capacity) combines with its faster cycle times for significant production gains.

The new 740C EJ ejector model, which combines the 745C's tractor with a horizontal-discharge body, provides added versatility and safety in certain operations. The 740C EJ can unload material to uniform depths while traveling at speed, potentially reducing the need for on-site spreading equipment, and can discharge the load with added stability in soft underfoot conditions, on side slopes and grades, and in environments where overhead obstructions are present.

New power-train efficiency

Engines in the new models meet Tier 4 Final/Stage IV emission standards, but are also available in versions meeting applicable emission standards for lesser- and non-regulated areas. The 735C's Cat C15 ACERT™ engine is rated at 452 horsepower (337 kW) and the C18 ACERT engine in the 740C EJ and 745C is rated at 511 horsepower (381 kW).

Articulated trucks designed for sale in higher regulated territories are equipped with the Cat Clean Emissions Module (CEM). This aftertreatment system includes a diesel particulate filter that can automatically regenerate (remove accumulated soot) without operator intervention or work cycle disruption. The fully integrated Cat CEM also includes a selective catalytic reduction system and diesel exhaust fluid (DEF) tank,

with the DEF tank being easily accessed from ground level.

The new Cat CX38 High Density Power Shift transmission used in the C Series trucks has nine forward speeds, two reverse speeds, and a number of electronic features that enhance overall performance and productivity:

Electronic Clutch Pressure Control, for example, modulates transmission-clutch engagement for smooth shifting and extended component life, and the Advanced Productivity Electronic Control Strategy feature is aimed at optimizing gear selection in all operating situations for efficient performance and fuel economy.

Shift Torque Management, combined with the improved Shift Control Logic feature, maintains consistent torque flow through the transmission during gear-range changes, provides automatic shift selection tailored to machine operation, and automatically downshifts for acceleration. Part Throttle Shifting allows shifting at lower engine speeds, resulting in improved fuel efficiency, quieter operation, and easier low-speed maneuvering.

As the new C Series trucks, with permanent six-wheel drive, encounter changing terrain and underfoot conditions, the Automatic Traction Control feature adjusts the level of engagement for the clutch locks in the inter-axle differential and in the three axle differentials. The system makes these adjustments while the machine is moving and does not require operator intervention. The system maintains optimum traction for steady production, relieves the operator of manually engaging the system, saves fuel by proportionally applying the locks based on operating conditions, and does not hinder tight-maneuver steering.

Retarding control for the C Series models can now be set to fully automatic, in addition to manual control. In automatic mode, the machine manages retarding through a combination of engine brake, gear selection, and service-brake application without operator intervention. The automatic system is available for both forward and reverse operations, and the manual system provides two levels of engagement for more experienced operators.

Other features that contribute to the overall efficiency and ease of operation include the Hill Assist system, which facilitates stopping and starting on grades, and the Waiting Brake system, which temporarily applies the service brakes during pauses in the work cycle, whether waiting at the loading or dumping site or delays from site congestion.

Cat Connect technologies

Cat Connect PAYLOAD technologies for the 735C, 740C EJ, and 745C help customers optimize operations and improve overall jobsite efficiency. With Cat Production Measurement as an option, operators can measure and deliver accurate payloads with confidence to boost productivity, lower costs and prevent the potential for overload damage. When used with Cat Connect LINK technologies, PAYLOAD data can be accessed through the online VisionLink® user interface. With accurate, reliable, performance and productivity data, customers can make timely, fact-based decisions about their fleet and effectively manage their jobsites.

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