

TIER 4 FINAL JCB 457 SHOWS OFF NEW JCB 'COMMANDPLUS' CAB

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JCB takes the wraps off a striking new wheeled loader design at this year's Conexpo exhibition – complete with the all new 'JCB CommandPlus' cab. The powerful JCB 457 is the first machine to show off a completely new cab structure, engine cover and rear counterweight design, all of which contribute to improved visibility, lower noise levels, increased internal space and an enhanced working environment for the operator.

In addition, the 457 is the first large JCB wheeled loader to meet Tier 4 Final emissions standards, with the adoption of a powerful MTU diesel engine that is perfectly matched to the machine's operating duties. The engine contributes to a massive fuel saving of around 16% compared to the previous model. As with other JCB machines, the engine in the 457 meets Tier 4 Final without the need for a costly diesel particulate filter (DPF), relying on an efficient combustion process, with a selective catalytic reduction (SCR) system and an exhaust fluid additive to meet the regulations.

Enhanced Operator Environment

The 457 is the first machine from JCB to utilize the company's next generation JCB CommandPlus cab. This totally new ROPS structure has A pillars that have been moved out to the same width as the rear of the cab, providing a larger interior with a panoramic front windshield. The machine features JCB's Command Driving Position, with revised pedals, a new adjustable steering column and seat-mounted hydraulic controls.

All switches and auxiliary controls have been repositioned on the right hand A pillar, providing the operator with a simplified interior and easy access to all machine controls. The 457 has two full color LCD screens, one in the center console and a second at the top of the right hand A pillar. This second screen incorporates access to the loader's operating menus and acts as a monitor for the machine's rear view camera.

The JCB CommandPlus cab delivers increased internal space as the heating, ventilation and air conditioning system has been repositioned outside the main cab structure. This provides additional storage for the operator, both behind the seat and in pockets in the front and side consoles. The new cab, in combination with the MTU engine, a hydraulically-driven on-demand cooling fan and the repositioned air conditioning system, contributes to a huge reduction in internal noise levels, from 71dB(A) to a class-leading 67dB(A), subject to final production tests.

Operators also benefit from LED lighting all round and the option of electrically adjustable and heated mirrors, for maximum visibility in all operating conditions. The rear view mirrors are now mounted in front of the repositioned A pillars, making it easier for the operator to see all around the machine. The cab door is hinged at the front, allowing easier access and exit from the machine for the operator from the steps. This also makes it easier for technicians to access the engine for regular maintenance and service work.

More Power, Lower Emissions

The JCB 457 is powered by a 7.7-liter MTU Tier 4 Final engine, delivering 258hp (193kW), up from 250hp (186kW) on the previous machine, despite the smaller engine capacity. More importantly, the engine delivers this increased output at lower rated engine revs, cutting fuel consumption, noise and emissions. JCB has also fine-tuned the engine, torque converter and transmission, to perfectly match the engine with both the standard four-speed and optional five-speed transmissions. This has resulted in fuel efficiency gains of up to 16%. As with other JCB machines, the 457 achieves Tier 4 Final emissions standards without the requirement for a costly and complex DPF. This reduces cost and service time for customers, increasing uptime and profitability.

The most visible change to the 457, aside from the new cab, is the adoption of a sloping one-piece hood. The hood can be electrically raised away from the cab to provide improved access to the engine and drivetrain for regular maintenance. The rear section can also be hinged away from the machine to provide access to the cooling pack, which now features a swing-out hydraulically-driven, on-demand cooling fan situated at the rear of the machine.

The new JCB wheeled loader design, with improved operator environment, easy access to regular service points and class-leading levels of comfort and control, will be adopted by smaller models in the line as they move to Tier 4 Final emissions standards over the coming months.

The Tier 4 JCB 457 will come as standard with JCB's LiveLink telematics system. This provides fleet managers and owners with remote access to real-time fuel consumption and machine working data, including operating hours and fault codes.

JCB LiveLink also allows customers to set working hour curfews, outside of which the machine will not function, along with geofencing. This permits the owner to set a geographical area in which the machine can work. If the loader is taken out of this area it will not start, preventing theft from site.

Source: wyynot GmbH; JCB