

Doosan Launches New DL280-5 Wheel Loader

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At Intermat 2018, Doosan is showing the new DL280-5 wheel loader for the first time, with a dedicated design for the waste and recycling market and general industrial applications. The DL280-5 is the latest development in the high performance Doosan wheel loader range, which comprises 12 models – covering operating weights from 12 to 35 tonne.

The DL280-5 offers high performance and high productivity with outstanding breakout force, tipping load and enhanced output. The front lift arm is powered by a closed centre hydraulic system with a 210 l/min axial piston pump. This system provides maximum hydraulic performance, without producing excess capacity, thus saving on fuel and extending the lifetime and reliability of vital components.

High Breakout Force

The DL280-5 features Z-bar kinematics with a simple lifting piston system designed for heavy-duty applications. The breakout force of 145 kN is combined with a constant bucket angle that is maintained throughout the range of movement. Bucket angles are also optimised in the travelling position and at ground level.

The lift arm benefits from an automatic Load Isolation System (LIS) – often called ride control – a standard feature which significantly improves the wheel loader's ride quality and operator comfort by ensuring a smooth ride over rough terrain and reduced cycle times owing to improved vehicle stability when moving. This provides higher productivity and better fuel efficiency when performing load and carry applications. The speed for automatic activation of the LIS system is fully adjustable by operators.

The DL280-5 is powered by the well-proven 5.9 l Doosan DL06 diesel engine which provides high torque, performance and durability in this and other models in the Doosan range. Featuring cooled exhaust gas recirculation (EGR), enhanced turbo charger technology and Selective Catalytic Reduction Technology (SCR) without having to use a diesel particulate filter (DPF) – a feature of particular interest for the waste and recycling industry - the DL06 engine is compliant with Stage IV/Tier 4 Final emission regulations.

The engine power is managed via three different working modes: ECO, Normal and Power, to ensure the best torque and power to handle even the toughest work conditions with the best fuel efficiency.

As standard, an auto shut-down reduces the idle time of the engine, to prevent the over-consumption of fuel and wasted operating time. Operators can easily set the timing for this function via the LCD display in the cab. A maintenance-free air pre-filter automatically removes debris and separates more than 99% of particles 20 micron and larger, which greatly extends air filter life.

The cooling compartment is equipped with a hydraulic reversing fan to provide very efficient cooling, with a variable speed range from 530 to 1800 rpm. Performance is automatically adapted for lower fuel consumption and shorter warm-up periods. The operator can again easily set standard intervals for the reverse fan from the LCD display in the cab.

The transmission is composed of a torque converter linked to an automatic Powershift transmission to produce a high output to deliver the highest possible traction force. The gear ratios are optimised and smooth, and shock-free shifts contribute to the high overall level of operator comfort.

The DL280-5 utilizes 20.5 R25 tyres with drive provided by reinforced axles which ensure a high load capacity. Limited slip differential locks at the front and rear automatically ensure maximum traction and easy driving over soft and muddy ground with no need for a manual differential lock. They also reduce the risk of skidding and prevent excessive tyre wear. A hydraulic differential lock – also available – can be activated automatically before one of the tyres starts to slip.

State-of-the-Art Operator Environment

The operator environment is state-of-the-art, with a modern and attractive work space offering generous headroom and full seat movement provides plenty of leg room. An ultra-comfortable Grammer seat is a standard feature with vertical and horizontal suspension, heating and full adjustability.

Materials for the interior of the cab have been carefully selected for their high quality and easy cleaning. In addition, the driver's belongings are readily at hand, thanks to several storage boxes placed throughout the cab. To ensure a healthy work environment, the cab air is filtered twice to eliminate all particles larger than two microns. The cab also meets ROPS/FOPS regulations – with a wide emergency exit (located on the right hand side) facilitating fast, easy evacuation when needed.

In common with the five larger Doosan wheel loaders - the DL300-5, DL350-5, DL420-5, DL450-5 and DL550-5 - the DL280-5 has a wide range of new safety and ergonomic features that are now available as standard.

A number of the new features are aimed at increased safety and visibility in and around the operator's cab. For example, a new handrail has been installed around the cab roof with three holding points, allowing operators to move very safely all around the cab to clean windows and to perform other tasks.

A new large step and access platform has also been added on the front of the cab and a change in the wiring routing has allowed the horn to be repositioned below the road light. Together these changes ensure maximum safety and confidence, with very safe and faster movements around the cab (without any obstacles) during daily maintenance. All of these features are important for work in waste and recycling and general industrial applications.

New Joystick Control

Inside the cab, there is a new ergonomic joystick control with a progressive thumb wheel added for the auxiliary hydraulic line (3rd valve), often used to power high tip buckets and grapples commonly used in the waste and recycling market. The progressive thumb wheel ensures that no additional lever is needed, providing the easiest combination of movements to manage the 3rd valve operations. FNR control has been relocated on the back of the joystick, via a three-position rocker switch, which is much more convenient and intuitive to use.

Of special interest for waste and recycling work, the operator has the benefit of additional convex mirrors installed on the lateral mirror frames. The wider angle and additional visibility provided by the convex mirrors along the side of the machine ensure safer manoeuvring of the wheel loader on site and in the yard.

The DL280-5 wheel loader also features a new lockable steel cap on the transmission oil filler, the shape of which has been changed to allow it to be locked with a padlock. When the transmission oil filler tube is locked, the transmission oil cannot be polluted with other types of oil or liquid, dust and other substances that could be transferred from handling waste material. It is also an additional guarantee of security for the customer.

A rear camera provides a clear view of what is happening behind the machine for added safety and peace of mind. The full colour display screen in the cab shows the operator what the camera sees. The panoramic view shows other vehicles coming up behind the loader or people on the ground, and indicators on the screen provide a good perception of distances.

The DL280-5 has the DoosanConnect telematics system as standard – offering customers peace-of-mind by being able to remotely locate, safeguard and monitor operating and production parameters for the machine.

Source: Doosan Construction Equipment