

New CommandPlus cab leads major upgrades for JCB's flagship agri wheeled loaders

8 November 2015 by JCB

A host of improved features for JCB's flagship wheeled loaders unveiled at Agritechnica will reinforce their position as the leading machines for agricultural bulk handling operations.

New features for the 435S and 457 Agri include:

- * CommandPlus cab with more space, new control features and a quieter working environment;
- * Tier 4 Final engines with no costly diesel particulates filter (DPF) or additional servicing requirements;
- * One-piece power operated engine hood and separate fuel/DEF access panel;
- * Increased power and torque with up to 16% less fuel consumption for the 457 Agri;
- * Intelligent Clutch Cut Off brake pedal-activated transmission disconnect
- * Choice of new seat-mounted joysticks or fingertip-operated controls

These significantly improved models head a unique range of wheeled loaders purpose built for farming applications, comprising compact, general purpose, bulk loading and high-performance 'S' versions with enhanced power and transmissions.

JCB Agriculture Managing Director, Richard Fox-Marrs said: "From the 403 Yardmaster to the 457 Agri bulk handling machine, JCB offers the widest range of wheeled loaders for the widest range of agricultural applications. The improvements to our flagship machines will make them more cost-efficient, and easier and more comfortable to use."

New engines

The JCB 435S and 457 Agri feature new engines that comply with the Euro Stage IV / US Tier 4 Final emissions rules without needing a costly diesel particulates filter (DPF) or the regeneration process needed to periodically clear such filters. Instead, they rely on clean combustion and efficient selective catalytic reduction (SCR) systems.

In both models, the new Intelligent Clutch Cut Off feature progressively disconnects the drive clutch according to brake pedal pressure – a good way to ease brake wear and tear while using engine revs to extract optimum power and flow from the twin piston pump hydraulics package.

The 14.6-tonne 435S – a favourite with contractors for silage clamp work – is powered by a 6.7-litre Cummins QSB engine as before, but now fitted with an SCR system and a diesel oxidation catalyst to meet the latest emissions rules.

The 435S retains the exceptional power-to-weight ratio that has earned it 'King of the Clamp' status, with 172kW (230hp) delivered through a six-speed powershift transmission. With unique torque lock-up in every gear, the transmission ensures optimum power-efficiency when climbing a silage clamp.

Away from the clamp, the brand new 15 tonne Rockinger hitch gives customers more reason to invest. The machine is well matched to towing with high engine power and a 6-speed transmission with torque lockup in all 6 gears, leaving any competitor machine in its wake. The fuel tank now provides a massive 400 litres, keeping downtime when refuelling to a minimum. More use throughout the year, more productivity and more comfort is the 435S's message.

The 457 Agri introduces MTU power to the JCB range and uses the 7.7-litre MTU 6R 1000 to exceptional effect. Peak power output is higher at 193kW (258hp) and more power is available at lower revs; an increase in peak torque – 6% up at 1150Nm – helps drive the big shovel into heaped materials.

Along with ground-breaking JCB torque converter tuning, these power and torque characteristics enable the 457 Agri to achieve the same productivity at lower engine load and rpm, resulting in fuel efficiency gains of as much as 16% over the previous version.

The 457 Agri comes with a choice of four- or five-speed powershift transmissions. Both have 40kph gearing but the closer ratios and torque lock-up in the five-speed unit result in swifter acceleration and climbing ability for faster loading cycles, plus improved fuel efficiency.

A choice of three axle configurations equips the JCB 457 Agri for different working situations – and among them is a new auto engaging differential lock for the front axle as an alternative to the torque proportioning and limited slip differentials.

CommandPlus cab

The new CommandPlus cab making its debut on the latest JCB 435S Agri and 457 Agri is a real treat for operators. Class-leading visibility and improved sound suppression make it a pleasant place to work and it is also more spacious – partly as a result of positioning the front pillars further apart than before.

Faster window demisting on chilly mornings and generous storage compartments feature alongside a choice of new joysticks or new fingertip electro-hydraulic multi-lever controls – both seat-mounted as standard.

Operators are kept better informed by new instruments – an LCD display providing routine vehicle information, intuitive help menus, reversing camera display and daily service checks such as engine oil and DEF levels.

A secondary screen acts as a command centre, enabling the operator to optimise the machine for different applications. These include adjusting the variable auxiliary hydraulic flow rate, loader arm suspension engagement speed, auto engine shut-off timer and engine fan reversing intervals with manual over-ride.

Control switches are now grouped logically according to function on the right-hand pillar but there are so many features conveniently accessible at the press of a finger – including new 360-degree lighting packages, electrically adjusted and heated external mirrors and new climate control air conditioning – that a 'quick reminder' menu display is included for occasional or seasonal operators.

Other new features include a 'set and forget' adjustable steering column that returns to the operator's preferred position after being pushed forward to ease cab entry and exit, and an optional media port for connecting entertainment and communications equipment to the built in sound system.

A selection of new high-spec heated and air cooled suspension seats, a large electric cool box and even deep pile carpet add to the ultimate in loading shovel cab comfort.

Source: wyynot GmbH; JCB