

## **New 7R Series tractors from John Deere**

Designed as versatile workhorses for contractors and medium sized to large arable farms, John Deere's newly styled 7R Series tractors feature more power, manoeuvrability and operator comfort than their 7030 Series predecessors. There are five models in the range, developing a maximum of 230 to 310hp with Intelligent Power Management (IPM), according to 97/68EC ratings.

For added security, 7R Series tractors are fitted as standard with CESAR Datatag and immobiliser systems, with a unique transponder based key. In addition, new models will be supplied with complimentary JDLink Ultimate telematics plus Service ADVISOR remote monitoring and diagnostics systems for the first year.

Having optimised the performance of its field-proven and operator-friendly high-pressure common rail (HPCR) PowerTech Plus engine technology, which consistently achieves leading fuel efficiency results in independent tests, John Deere has maintained the single fluid, diesel-only approach on these latest models to conform to Stage IIIB emission standards.

The 9-litre PowerTech PVX engine on the three larger models – 7230R, 7260R and 7280R – features a variable geometry turbocharger (VGT), cooled exhaust gas recirculation (EGR) and exhaust filters, which include a diesel oxidation catalyst (DOC) and a diesel particulate filter (DPF). The two smaller models – 7200R and 7215R – are powered by 6.8-litre PowerTech PSX engine using series turbochargers, which combine a low-pressure fixed geometry and a high-pressure variable geometry turbocharger. With IPM, both engines deliver an additional 30hp for transport and non-stationary pto applications.

The electronically controlled viscous fan cooling system automatically adjusts fan speed to match load changes. To maximise efficiency of the cooling system, air is pushed into the engine compartment instead of being pulled in. This helps to minimise dirt intake and keeps the radiator clean, as well as increasing fuel efficiency by 3 to 6 per cent, depending on the application.

There is a choice of four transmissions, including PowerQuad Plus with speed matching and AutoQuad Plus with FieldCruise and EcoShift functions. The newly designed CommandQuad transmission includes an Efficiency Manager, which makes sure that the gear and throttle work

hand in hand to optimise fuel efficiency, with automatic range shifting on the road.

There is a choice between a fully automatic mode, with gear and engine rpm selection depending on load, and a manual dial-up mode for targeted speed applications, which includes five ranges with four power speeds per range. In addition to the convenient CommandArm control, this transmission features 42kph Eco and 50kph options and a left hand reverser for easy direction changes. For maximum fuel efficiency, the AutoPowr continuously variable transmission has been completely redesigned, with all new hardware and control software.

The 7R Series tractors feature the same newly designed CommandView II cab as the 8R Series machines. New levels of comfort are provided by the spacious interior, the armrest controlled and roof-integrated air conditioning system, all-round visibility both day and night from an increased glass surface area and 360-degree lighting pattern, which delivers a 74 per cent increase in available luminescence, and more storage space than ever before.

For maximum operator comfort, these new tractors are optionally available with either ActiveSeat suspension to compensate for up to 90 per cent of the tractor's vertical movements, or HCS Plus hydraulic cab suspension. This is a semi-active dampening system that anticipates loads and braking to maintain the overall balance of the cab, while still providing the driver with an accurate feel for the tractor and ground surface.

The new right-hand CommandArm console with its integrated CommandCenter display puts all the key tractor functions within easy reach. The 7in CommandCenter display is ISOBUS compatible and includes Access Manager as standard, while the optional touchscreen version also includes video capability. Both standard and touchscreen versions accommodate key applications such as the CAN-bus controlled SCVs and intelligent Total Equipment Control (iTEC), which allows the operator to automate multiple functions simultaneously.

In addition, important GreenStar precision farming applications can now be operated via the display, including AutoTrac and SprayerPro. The CommandArm console also incorporates the settings for cruise control, iTEC, transmission and pto settings, hitch functions, air conditioning and radio controls, mechanical front wheel drive (MFWD) engagement and the light controls. Tractors equipped with PowerQuad Plus or AutoQuad Plus transmissions feature an alternative right-hand control console. The optional GreenStar 2630 display enables the use of AutoTrac and Guidance Pro modules, and provides ISOBUS capability, documentation, video functionality, Access Manager and a stand-by mode.

The newly designed structural chassis of 7R Series tractors takes advantage of the high power density to cope easily with demanding load and draft applications. For putting maximum power onto the ground, the

tractors are equipped with TLS Plus triple link suspension, in combination with MFWD. TLS Plus features self-levelling and automatic adjustment of axle sensitivity.

Also optionally available for these new tractors is John Deere's exclusive ActiveCommand Steering system, which reduces steering effort in order to minimise operator fatigue and improve driving comfort and control. This fully electronic steering control system automatically adjusts the road wheel angle based on the lateral acceleration of the tractor.

This improves control when cornering at transport speeds, as well as the tractor's ability to hold a straight line. Furthermore, the system's Variable Ratio Steering module reduces lock-to-lock turning in the field, for quicker headland turns. Compared to a conventional steering system, ActiveCommand Steering produces a 75 per cent reduction in typical hand movement.

New large capacity pumps deliver increased oil flow and lift capacity from the closed-centre, pressure and flow compensated hydraulic system, which can operate a maximum of eight SCVs, up to six at the rear and up to three at the front of the tractor. Maximum lift capacity of the rear hitch is 9562kg on the 7200R, 7215R and 7230R and 10,788kg on the 7260R and 7280R, while the fully integrated front hitch (with pto) has a lift capacity of up to 5200kg. The tractors also feature a new pick-up hitch.

John Deere 7R Series tractors have a slightly longer wheelbase than previous models, and the top two models can be fitted with larger Group 49 tyres with a maximum diameter of 215cm. There is also the option of a flanged or rack & pinion rear axle for extra versatility, and the shorter overall length of the tractors has improved turning radius by 18 per cent.

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