John Deere has increased the horsepower limit of its 9R/9RT Series of wheeled and track tractors, and the company unveiled the new lineup during a dealer event in Milwaukee, Wis. “This is the largest expansion of our top-line, four-wheel drive and track tractor series in company history,” said Jerry Griffith, division marketing manager, John Deere Waterloo Works, Waterloo, Iowa. “From 370 to 620 hp, the 9R/9RT Series provides the most powerful, versatile and durable four-wheel-drive and high-horsepower track tractors designed to handle the widest range of farming operations and extreme-duty applications.” The new tractors were given more horsepower and hydraulic capacity across all models in both articulated and track tractor platforms. The company said machines are designed for row-crop applications and large-acre, small-grain operations with tough field conditions and hillside terrain. Scraper models are also available for heavy earthmoving applications.

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We’ll give you TOTAL control.

Curtiss-Wright offers more commercial vehicle function control solutions than any other manufacturer. Whether you build equipment for the construction, agricultural, on or off-highway markets, you now have a single source for all operator interface controls.

The Arens line includes controls specifically designed for applications in the construction, agricultural, medium and heavy-duty vehicle markets. These control solutions include electronic controls, electronic throttle pedal assemblies, transmission shift controls, hydraulic valve controls and self-locking mechanical controls.

Beyond the operator interface, Curtiss-Wright offers integrated control systems designed for use in commercial vehicles applications that include: integrated cockpit control centers for agricultural and construction equipment; drivetrain controls for medium and heavy-duty trucks; hybrid vehicle traction and export power electronics; a broad range of power distribution modules and integrated systems.

From state-of-the-art integrated control consoles to hydraulic valve controls, Curtiss-Wright is your single source solution.
The series is now made up of 10 wheeled models and six tracked models: the 9370R, 9420R, 9470R/9470RT, 9520/9520RT, 9570R/9570RT, 9620R, and these Scraper Special tractors: 9470R/9470RT, 9520/9520RT, 9570R/9570RT and the 9620R. The last three digits of the model number indicate horsepower. A new model is designated at increments of 50 hp.

Engines with the wheeled tractors start out with a 370 hp rating in the 9370R, which uses a John Deere PowerTech PSS 9.0L diesel engine. The 9420R, 9470R and 9520R tractors use the John Deere PowerTech 13.5L diesel engine.

The two models with the most horsepower, the 9570R and 9620R, use a 15 L Cummins QSX15 engine. Painted green to match the rest of the tractor, the engine is built at Cummins’ Jamestown Engine Plant in Jamestown, N.Y., and incorporates a single Cummins VGT turbocharger.

In the twin-track tractors the 9470RT and 9520RT use the John Deere PowerTech PSS 13.5L while the largest tracked tractor, the 9570RT, also gets the 15 L Cummins QSX15 diesel. Each engine is Tier 4 final compliant. Just like the two John Deere PowerTech engines in the 9 Series tractors, the QSX15 uses exhaust gas recirculation (EGR) and an exhaust aftertreatment combination of a diesel particulate filter (DPF) and selective catalytic reduction (SCR) to meet the near-zero NOx and PM emissions standards.

“With the addition of the 15L to the 9.0L and 13.5L engine lineup, this
Griffith said the company elected to not introduce a 620 hp version of the two-track model at this time “due to a priority of resources.”

“We focused a lot of energy on the wheeled models this go-around and chose to not to put R&D money into increasing the horsepower in the twin track model,” Griffith said.

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Operators can dial in the tractor’s new HydraCushion suspension system from the cab with regards to firmness and maximum tractive effort. Designed to prevent power hop, the HydraCushion suspension system, shown here looking under the engine toward the rear of the tractor, uses two hydraulic cylinders to separate the axles from frame while three nitrogen-filled accumulators smooth out the shocks.

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New Self-Propelled Forage Harvesters

Meeting Tier 4 final regulations was one of the biggest drivers behind John Deere’s redesign of its self-propelled forage harvesters (SPFH), but looking under the rear panels of the new 8000 Series reveals more than just an engine swap. The company said more than 5000 part numbers have been changed.

“The 8000 Series builds upon the best features of our popular 7000 Series self-propelled forage harvesters,” said Shaun Fritchey, marketing representative, John Deere Ottumwa Works, Ottumwa, Iowa. “This new series integrates cutting-edge crop analysis and documentation with an innovative machine design to provide superior efficiency, reliability and crop quality.”

Growers work to get the most high-quality forage out of the field as possible with the least amount of time and expense. The crop handling sections of the machine use Dura-Drum cutterheads with knives that are hardened for longer life and precise cutting, the company said, and KernelStar processor technology that is based on a patented bevel disc design that smashes kernels for silage processing. The AutoLOC (automatic length of cut) system allows the operator to dial in the precise cutting length based on forage conditions, Fritchey said.

Two cutterhead widths that are matched to engine horsepower are available, and new header solutions and crop-flow layouts increase flexibility among different crops and provide better performance in wet or dry conditions.

“The 8000 Series is designed from the bottom up to help producers maximize harvest efficiency and crop quality,” Fritchey said. “Repeated field research has documented consistent chopping quality in all crops. And, more machine productivity coupled with increased fuel efficiency per ton in all crops makes the 8000 Series a top choice for custom operators or dairy and feedlot operations.”

The new models are all single-engine machines. Models with standard crop-flow channels are the 8100 with a John Deere PowerTech 9.0L diesel engine rated 375 hp; the 8200 with a John Deere PowerTech 9.0L diesel engine rated 425 hp; the 8400 with a John Deere PowerTech 13.5L diesel engine rated 533 hp, the 8500 with a 577 hp John Deere PowerTech 13.5L diesel engine. The 8600 forage harvester has a wide crop-flow channel and uses the 13.5L diesel rated 617 hp.

In August John Deere also announced that a successor to 7980, the largest forage harvester in the 7000 Series, would be introduced in 2016. No further details about the new machine were provided. The current 7980 is powered by a 19 L Cummins QSK19 diesel engine rated 800 hp.

The most obvious change to the driveline on the 8000 Series is the relocated engine and the cooling package, which helped optimize the cooling efficiency and balance the weight distribution.

“As the forage harvester evolved the harvest heads continued on page 68
increased horsepower and it now has three modes of operation including an automatic mode. Hydraulic flow has also been increased to 115 gpm to handle large implements. “Big air seeders need more than 100 gpm of flow, so now we have an industry leading 115 gpm flow rate,” Griffith said. “Having that much flow means growers can run at a lower engine rpm and still have right flow for the job while saving diesel fuel.”

In order to mitigate power hop and road lope, John Deere has given the 9520R, 9570R and 9620R models a new suspension system. The HydraCushion suspension system is continued on page 68

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have gotten bigger to the point where we had a ten-row head that’s sitting way out in front because it worked better in tall corn,” said Tim Meister, product line manager – Self Propelled Forage Harvester, John Deere Ottumwa Works. “As we did that we kept adding ballast out further to balance the weight of the machine.

“We had the kernel processor in the middle and weights in the back. We wanted to give it better balance so now the entire engine is 100% behind the rear axle. The engine weighs about 4000 lb., so to push it from in front of the axle to behind shifted the weight tremendously.

“This layout helps with braking, too, keeping the rear wheels on the ground. We went from 5600 lb. of ballast to 1600 lb. with a 10-row head and we were able to put some of that weight savings into final Tier 4 components.”

When suitcase weights are required, such as with corn, the weights go on the rear bumper.

The main belt is positioned on the left-hand side of the machine to allow for unobstructed access to the crop path for better serviceability and accessibility of the kernel processor and blower area. The major crop engaging components, such as the kernel processor and the cutterhead, are driven via the main belt while the feedrolls and header are hydraulically driven.

Customers can choose between an electric-shift, three-speed transmission with standard hydrostatic control or the ProDrive ground-propulsion system where an automatically shifting transmission works with an electronic hydrostat. The base transmission available on the 8000 Series is the push-button shift transmission (PBST) ground-drive propulsion with three different speed settings from 12 to 19 mph. The transmission is based on the three-speed transmission of the 7080 Series but with an integrated electrohydraulic actuated park brake. The optional ProDrive transmission allows for speeds up to 25 mph.

Inside the cab, comfort has been improved including better visibility. Operators get the GreenStar 2630 with touchscreen display and all functions conveniently in the CommandARM, remote display access and AutoTrac with RowSense. Technologies such as Harvest Lab, HarvestDoc, and other software applications as part of the John Deere FarmSight platform provide access to equipment and agronomic information.

The new forage harvesters are built by John Deere Werke Zweibrücken in Germany, which has been the company’s primary European harvesting equipment site since the 1960s.

The most obvious change to the driveline on the 8000 Series forage harvesters is the engine, which now sits behind the rear axle to help with weight distribution. The cooling system sits in the middle of the machine.

When you increase tire pressure it takes away traction and increases compaction. Adding ballast takes a lot of weight, requires more set up time and created compaction, which is a leading yield killer.”

Based on the front axle, the system mitigates power hop and road lope to ensure tractors get all of their horsepower to the ground. Two hydraulic cylinders separate the axle from the front frame of the tractor while three nitrogen-filled accumulators smooth out the shocks as the tractor tries to get into a power hop rhythm. An electronic control box and valves help keep the tractor from getting into a power hop. The operator can optimize the setting of the suspension from the cab with regards to firmness and maximum tractive effort.

The CommandView III cab provides increased operator comfort and ease of operation with a redesigned CommandArm, with a John Deere 4600 CommandCenter display to control tractor functions. The operator seat swivels 40° to reduce strain when
Little is known about this machine, including its anticipated availability. But this prototype 9RX four-track tractor has generated plenty of buzz this summer. There was a leaked photo on social media and now dealers got to see the actual machine in August, when the tractor was driven past the grandstands during an event in Milwaukee, Wis.