

Case IH harvests power with next-gen Steigers

New emissions regulations tend to equate not just to cleaner air, but also to new engines that are expected to at least match the power and efficiency of the engines they replace. To address such needs, **Case IH** has added more performance across both the wheeled and Quadtrac versions of its STX Steiger tractors, which will be produced in Fargo, ND.

"We're [offering] six new models based on three frame sizes and 29 different configurations," said Kyle Russell, Marketing Manager for Case IH Magnum and Steiger tractors. "We can match horsepower to any four-wheel-drive task, whether that's pulling a row-crop cultivator with an AccuSteer tractor, land-leveling with a scraper package, or minimizing compaction with a Quadtrac model."

New Tier 3-compliant, 24-valve, electronic engines provide power to all six models, topping out with the STX530 rated at 530 hp (395 kW) in wheeled, Quadtrac, and scraper configurations. A 15-L, **Cummins** QSX15 engine offers a 40% torque rise for an additional 54 hp (40 kW) at 1800 rpm.

Like the STX530, the other five new models match engine power to their names. The wheeled STX280 and STX330, which feature AccuSteer versions, use new 8.3- and 9-L engines, respectively. Both the STX380 and the STX430 share a new 12.9-L Case IH engine sourced from

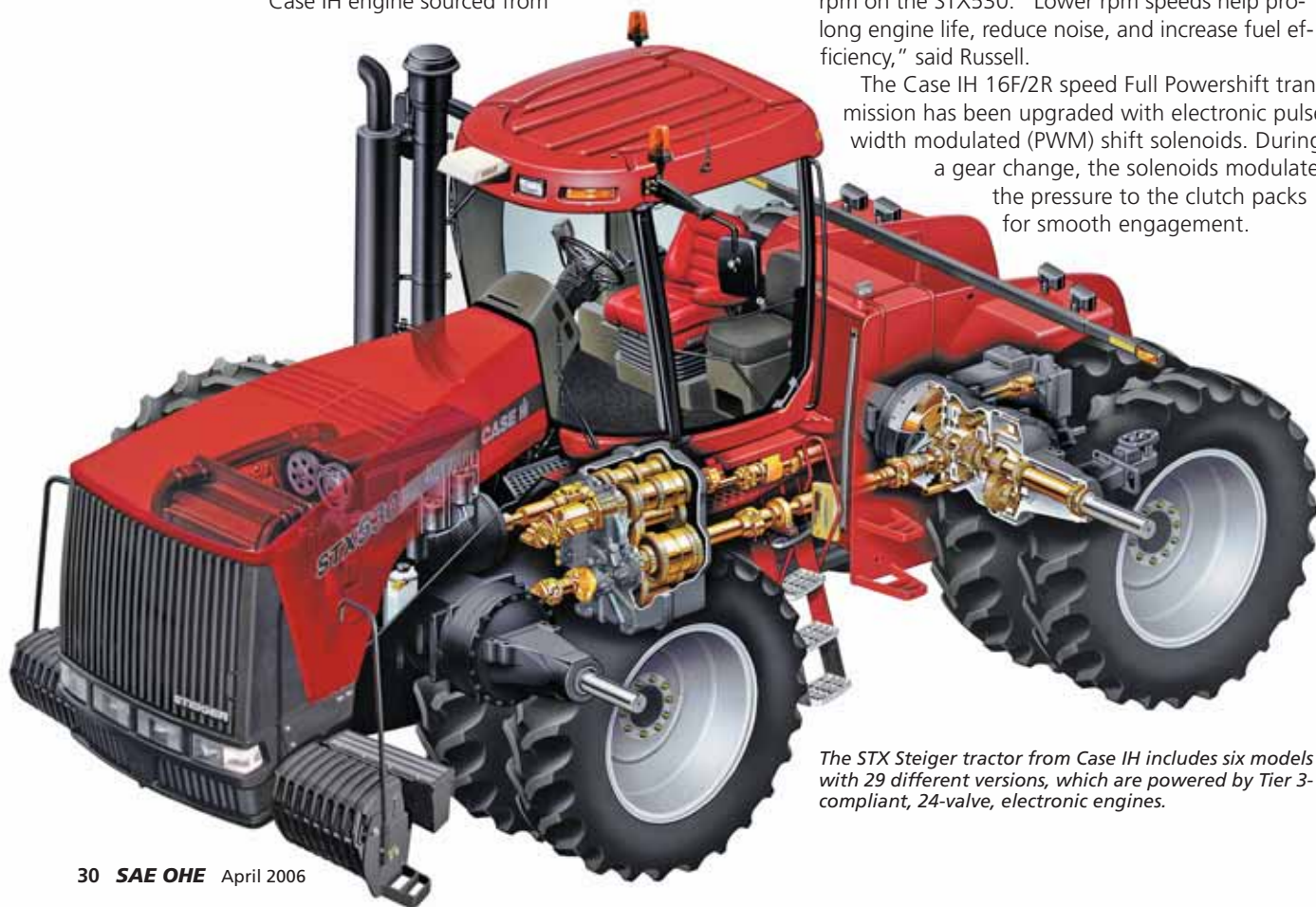
Iveco that also delivers a 40% torque rise, and are available in wheeled, heavy-duty wheeled, scraper, and Quadtrac configurations. The STX480 offers the same configurations as the STX380 and STX430, and is powered by the Cummins 15-L engine. The 12.9-L engine will be serviceable by Case IH dealers.

"One of the key features of electronic engines is their ability to continually monitor operating conditions and adjust fuel and air flows," said Russell. "By automatically optimizing performance, engine life and fuel efficiency are improved."

Each of the inline, six-cylinder engines for the next-generation Steiger tractors are turbocharged and air-to-air aftercooled. They use a cross-flow head design that intakes air from one side and vents exhaust directly out the other side. Compared to systems that exhaust air on the same side as the air intake, Case IH says the cross-flow head keeps air cooler, providing smooth airflow and better coolant circulation for longer engine life.

To accommodate the extra cooling needs of the Tier 3 engines, the air filter for the STX380, STX430, STX480, and STX530 tractors has been relocated under hood, improving the efficiency of airflow and filter life. Engine speeds have also been decreased to 2000 rpm for the majority of the line, rising to 2100 rpm on the STX530. "Lower rpm speeds help prolong engine life, reduce noise, and increase fuel efficiency," said Russell.

The Case IH 16F/2R speed Full Powershift transmission has been upgraded with electronic pulse width modulated (PWM) shift solenoids. During a gear change, the solenoids modulate the pressure to the clutch packs for smooth engagement.



The STX Steiger tractor from Case IH includes six models with 29 different versions, which are powered by Tier 3-compliant, 24-valve, electronic engines.

"Our PWM design feathers the gear engagement, creating smoother shift cycles on the road and in the field," said Russell.

Case IH STX Series tractors also offer AutoShift with Auto Field and Road Modes. AutoShift automatically selects forward gears based on transmission output shaft speed, the current gear, and engine torque load. In Auto Field mode, the transmission maintains engine speed by upshifting and downshifting between the nine gears in working range under changing load conditions. In Auto Road mode, it uses the throttle to shift from 8th to 16th gear to achieve maximum transport speed, up to 23 mph (37 km/h).

Electronic End-of-Row is standard on all Steiger tractors. The system will record and then control up to 30 steps in two sequences, including up and down shifting, raising and lowering the three-point hitch, using remotes and throttle all through a single switch, greatly simplifying operation at the headlands.

All six STX Series Steiger tractors feature a Surveyor cab, described by the company as the largest in the industry. Visibility in the cab is enhanced via 67.8 ft² (6.3 m²) of tinted glass. The cab's air-suspension seat uses a patented magnetic fluid shock absorber to take the edge off bumps in the field and traffic on the road. Sensors in the seat, standard with the luxury-cab package, react 500 times per minute and adjust the ride for maximum operator comfort and control.

"Operator eyestrain and nighttime safety were improved with a new lighting package," said Russell. The 360° package features up to eight high-intensity discharge lamps for up to 350 ft (107 m) of near-daylight visibility after dark. Delayed egress lighting has been added to help operators safely exit the tractor at night.

Jean L. Broge

Deere digs deep

The new **John Deere** 240D LC excavator retains many of the features of its predecessor, but significant improvements—including faster hydraulics, a redesigned cab, and a new cooling system—were designed to deliver greater productivity and more uptime, as well as lower daily operating costs.

The totally redesigned cab keeps operators comfortable and productive with its fully adjustable suspension seat and extra legroom. Visibility also is improved over its predecessor,

with 47% more right-hand window glass and a larger roof-hatch area.

Shorter pilot controls result in smooth, predictable handling with less effort, and less fatigue. A completely redesigned multifunction monitor features large, easy-to-read gauges, warning lights, and icons that provide operating information at a glance. Multiple languages accommodate a variety of operators. Easy-to-navigate screens provide access to warning messages, attachment preferences, and maintenance and service information.

Generous hydraulic flow and precise metering ensure powerful digging force, accurate control, and multifunction operation. The faster hydraulic system is key to the 240D LC's en-

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The 240D LC excavator from John Deere is powered by a 6068H turbocharged diesel engine that delivers 177 hp (132 kW).

hanced productivity, which is increased by up to 8%, according to Mark Wall, Product Marketing Manager, John Deere Construction & Forestry. "This improved hydraulic response ensures faster digging and more work per hour," he said. "Drawbar pull, swing torque, and maximum hydraulic flow also have been improved significantly."

The 240D LC features a John Deere PowerTech engine that meets EPA Tier 3 emissions requirements, featuring a four-

John Deere 240D LC Excavator Specifications

Engine	John Deere 6068H, turbocharged, air-to-air cooled
SAE net rated power	177 hp (132 kW)
Typical operating mass	54,244 lb (24,605 kg)
Drawbar pull	49,920 lb (222 kN)
Swing torque	54,857 lb-ft (74,376 N-m)
Lift capacity	8518 to 22,540 lb (3864 to 10,224 kg)
Arm force	24,020 lb (107 kN)
Bucket digging force	37,670 lb (168 kN)
Maximum reach	35.6 ft (10.8 m)
Maximum digging depth	24.7 ft (7.5 m)

valve design that enhances fuel economy. The new cooling system is designed to keep the engine and hydraulics cool in harsh environments and at high altitude. The hydraulically driven, cool-on-demand fan runs only as needed, reducing noise, fuel consumption, and operating costs.

The 240D LC excavator also features several improvements to keep daily operating costs down and simplify maintenance. Service intervals have been extended to 5000 h on the hydraulic oil. Easy-access remote-mount oil and fuel filters are located in the pump compartments, so they can be changed without crawling under the machine or removing access panels. Large service doors provide wide-open access to daily service items, and daily service points are grouped for quick access.

David Alexander

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Kalmar's intelligent terminal tractor

Kalmar has introduced the first terminal tractors to use controller area network (CAN) bus control technology. CAN bus is a communication standard based on a looped network that makes it easier to connect different modules, comparable in many ways to plug-and-play. Engine, gearbox, valves, etc., can all be connected by simply plugging them in.

Known as the i-series, the new intelligent terminal tractors—TTX182i, TRX182i, and TRL182i—are driver-friendly, easy to maintain, and meet the latest environmental regulations. Other benefits of the i-series promised by Kalmar include troubleshooting in one tenth of the time of conventional machines, simplified electrical systems and maintenance, and longer service intervals.

"Improved performance is demonstrated in better pulling capacity and a smooth automatic gear change," said Patrik Sjöblom, General Manager of Kalmar Terminal Tractors. "Combined with the information and data generation that the CAN bus control system provides, such as driving positions and fuel consumption, this gives the operator freedom to concentrate on getting the job done. Troubleshooting now takes only seconds, and there are only one-third of the wire harnesses of conventional machines."

The TTX182i is Kalmar's machine for container terminal and industrial operators who require two-wheel drive tractors for hauling heavy trailers. The TRX182i is designed for roll on-roll off operation. Its four-wheel drive configuration enables it to cope with hauling trailers and road-going semi-trailers up of-ten-slippery ship-to-shore ramps and ships' internal ramps. The



CAN bus technology and a choice of new engines provide Kalmar's new intelligent terminal tractors more power and torque, smooth gear changing, and faster troubleshooting.

TRL182i is designed to specifically to handle mega trailers with low fifth-wheel height.

Kalmar's new i-series tractors offer features to help drivers, including a proportional liftspeed control and an Auto-Revs-Up function that adjusts the hydraulic oil flow to the optimum level without the driver pushing the accelerator to the floor.

CAN bus also helps the driver with several standard safety features, such as blocking the engagement of forward-reverse, four-wheel-drive mode, king-pin opening, and range change when the tractor is moving. The i-series also enables lifting height adjustments and weight control.

A key component of the CAN bus control system is the complete integration of the engine, transmission, hydraulics, and other parts of the tractor, resulting in a more comprehensive and effective way of generating and collecting information. A single monitor shows all the information concerning machine operation and performance, including speed and fuel economy, as well as gear, engine, transmission, and pneumatic data.

The display also ensures that maintenance planning is easier because it updates the driver and technicians on the number of service intervals and hours remaining until the next service. In the event of a problem, a troubleshooting system notifies the driver immediately.

New engine choices—the **Volvo** TAD750VE and the optional **SisuDiesel** 74CTA—include innovations such as an electronically controlled protection system, common-rail fuel injection, a new type of exhaust gas circulation, and advanced diagnostics, all of which result in improved performance while meeting EU Stage 3A / Tier 3 emissions standards. The pulling capacity of the tractors is also considerably better than that of previous models because of higher torque. The service interval of both engines is also longer than before.

Dana's RTE15822 automatic gear control transmission is a standard feature in the new tractor models, enabling smooth gear changes without tractive effort interruption. Although the system is automatic, the driver can also select a manual gear change mode. The transmission service interval has been increased by 100% to 1000 h.

David Alexander

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Better lifting from Haulotte

The **Haulotte** Group is celebrating its 20th anniversary this year, and is using that milestone to publicize its new name (dropping Pinguely and adding Group), new logo (chevrons to represent the unfolding of an articulated boom), and new products. Haulotte has a reputation for the design of aerial lifts, and now it has unveiled two new significant products: the HA 260 PX and the HA 41 PX.

The HA 260 PX (to be known as the HA 80 JRT in the U.S.) is a diesel articulated boom lift designed to strike a balance between height and range. It has a maximum working height of 26 m (85 ft), a maximum horizontal reach of 16.2 m (53 ft), and is intended for multi-purpose applications in construction and buildings maintenance.

Haulotte has consolidated its presence in the big-boom market with the HA 41 PX articulated boom (the HA 130 JRT in the U.S.), a 41-m (134.5-ft) articulated boom



The HA 260 PX diesel articulated boom lift from Haulotte has a maximum working height of 26 m (85 ft) and a maximum horizontal reach of 16.2 m (53 ft).



Haulotte's HA 41 PX is a 41-m (134.5-ft) boom lift with an articulation point at 16.5 m (54 ft) and a 19.2 m (63 ft) outreach.

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lift, which owes its versatility to an articulation point at 16.5 m (54 ft) and its 19.2 m (63 ft) outreach. Productivity is enabled by using the high articulation point to negotiate around obstacles, and the boom articulation design can be used to come down without using the arm. With both booms and a fly jib range of 140°, the HA 41 PX has multiple possible uses in industries from manufacturing to dockyards.

Both of the new boom lifts have features that include continuous optimum movement management, a new platform load controller, 5° tilt alarm (4° on the HA 41 PX) allowable in all positions, hydraulic platform compensation, and stability management in all positions. Fully proportional, simultaneous controls for accuracy and smoothness in movement provide optimized performance and maneuverability in all working positions.

With four-wheel drive, four-wheel steering, extendable axles, simultaneous controls, and large ground clearance, both of the new boom lifts are easy to steer and compact for access to tricky work sites.

Designed for safety, both the new lifts meet the demands of the latest labor regulations to European and international standards. The Haulotte Group is an active partner of the **International Powered Access Federation**, an industry-wide body that coordinates safety, training, and compliance with legislation and standards.

David Alexander

Terex's all-wheel-steer dumper

Terex has launched what it claims is the first all-wheel-drive articulating site dumper available in North America, its new PS6-AWS dumper.

Used throughout Europe, the PS6-AWS dumper is a scaled-down version of a dump truck. Its unique chassis allows the body of the bed—located in front of the machine—to rotate 90° on either side. The rotating design enables an operator to unload from the side while keeping the chassis straight.

"Let's say you've dug a trench and now you need to lay gravel at the bottom," said Terex Product Manager Lowell Stout. "Simply drive the PS6-AWS parallel to the trench, rotate the bed and start dumping, and fill the trench as you drive along. It's a versatile machine that will help increase on-site productivity."

Using a power shuttle four-speed transmission with four speeds available both forward and reverse, the PS6-AWS has a travel speed of 17 mph (27 km/h). It offers a turning circle of 25 ft (7.6 m), a heap capacity of 4.5 yd³ (3.4 m³), and a payload capacity of 13,300 lb (6035 kg).

The four-cylinder Perkins 1100 series diesel engine is rated at 80 hp (60 kW) at 2200 rpm, and meets all Tier 2 emissions requirements. The PS6-AWS also features 12-ply tires for good traction.



The new PS6-AWS dumper from Terex is powered by an 80-hp (60-kW) Perkins 1100 series diesel engine.

Because the dump body is in the front of the machine, the engine is in the rear. "The tilt-up hood resembles that found on our backhoes," said Stout. "The design gives operators unrestricted access to the engine and cooling system, which simplifies servicing the machine."

David Alexander





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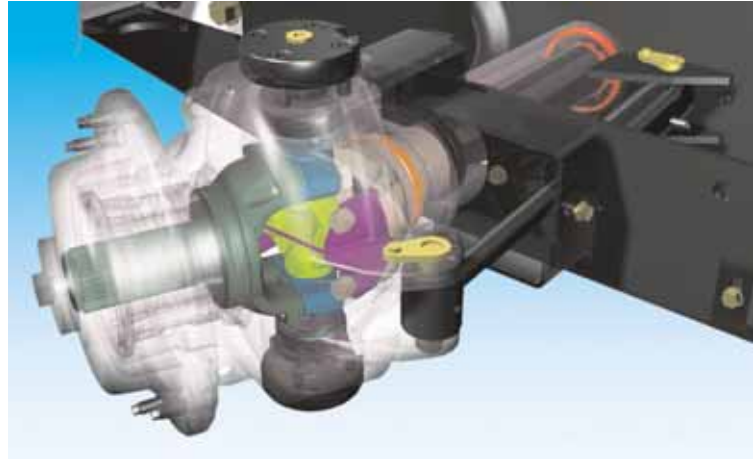
Bobcat updates its loaders

From the inception of the skid steer loader nearly 50 years ago, **Bobcat** (an **Ingersoll-Rand** company) has worked to incorporate innovative technological advancements to improve its compact equipment. That tradition is continuing with the introduction of K-Series skid steer loaders (S130 through S300), compact track loaders (T140 through T300), and the A300 all-wheel-steer loader.

New to the K-Series loaders is the SmartFAN cooling system, a hydraulically driven cooling fan that senses machine operating temperatures and then self-regulates to rotate only as fast as it needs to. The temperature-controlled, variable-speed fan optimizes the cooling needs of the loader and can



The A300 all-wheel-steer loader from Bobcat has been upgraded with features such as the SmartFAN cooling system.



Both axles on Bobcat's A300 can steer as shown above, or they can be locked in the straight position for skid steer-mode operation. Steerable axle ends have permanently lubricated U-joints.



Bobcat's updated K-Series compact track loaders (T180 through T300) feature an additional roller in the track undercarriage for better ride quality and improved service life.

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be 30% quieter than the previous models in some operating conditions, according to the company. A quieter machine reduces operator fatigue, allows for better communication with others outside the cab, and enables contractors to work longer hours by complying with city noise ordinances. For even better noise reduction, an additional sound-reduction package is available.

The K-Series loaders continue to feature the Bobcat dual-path cooling system, which brings in clean air from above through the oil cooler and radiator, and pushes hot air from the engine and hydrostatic area out two side vents. This design reduces dirt and debris restrictions in the cooling system and minimizes debris in the engine compartment.

Bobcat has upgraded the drive chain size to 120 HSOC (high strength oval chain) from 100 HSOC on K-Series large-frame loaders. This upgrade makes the bowtie-style drive

chains 38% stronger, thus extending their service life in applications such as those requiring over-the-tire steel tracks. The Bobcat chaincase is virtually maintenance-free because no chain adjustment is needed and its protected axle seals and bearings never need greasing.

K-Series large-frame vertical lift path loaders have also received a boost. By adding an extra 2 in (50 mm) to the loaders' lift height, operators will be able to load and unload materials from trucks a little more easily. The K-Series large-frame loaders with vertical lift path include the S250, S300, T300, and A300.

By adding the K-Force hydraulic system to K-Series medium-frame loaders (S130 through S205 and T140 through T190), operators can get the same

technology and hydraulic performance as that available on large-frame loaders. The new hydraulic system features a dedicated charge pump that provides an 8% increase in hydraulic breakout forces, hydraulic lift to full height, and attachment torque. The system produces more usable hydraulic power that allows more efficient operation of ground-engaging attachments, thus reducing the chances of stalling or having to reposition.

An innovative improvement made to K-Series compact track loaders (T180 through T300) was the addition of another roller to the track undercarriage. The additional roller provides better ride quality and improves both individual roller life and overall track life.

David Alexander

Compact telehandlers from JLG

JLG Industries has introduced its new line of compact telehandlers. The Model G5-19A has a maximum capacity of 5000 lb (2268 kg); the maximum capacity for the Model G6-23A is 6600 lb (2994 kg). The machines are designed with features for use in a variety of applications where compact size and

changes from forks to other attachments such as the general-purpose bucket, a digging bucket, and a truss boom.

Each telehandler is powered by a 100-hp (74.6-kW) Deutz diesel engine, and coupled with four-wheel drive it provides 45% gradeability. Maneuverability on congested sites is



JLG's new compact telehandlers are powered by Deutz diesel engines.

maneuverability are useful, such as landscaping, agriculture, and general construction.

The JLG Model G5-19A has a lifting height of up to 19 ft (5.8 m) and a forward reach of 10.4 ft (3.2 m). Features include a cab designed for improved operator vision with 140° carriage rotation. A mechanical quick switch enables fast

helped by its compact dimensions and three steering modes: four-wheel steering can be used for circle or crab steer, or the machine can be steered with just the front wheels.

Optional accessories include air conditioning, road lights, front and rear cab work lights, and a rotating beacon.

David Alexander



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