

Kobelco SK260LC excavator delivers total control

Designed to provide precision control for fine grading and leveling applications, **Kobelco Construction Machinery America's** new SK260LC Acera Mark 8 hydraulic excavator features an innovative intelligent total control system (ITCS) that recognizes the operator's moves and provides smooth hydraulic response.

As the operator moves the control levers, an auto-acceleration system increases engine speed and hydraulic flow by a proportionate amount, resulting in even acceleration for precise operations. After four

seconds of operator inactivity, the auto-deceleration system reduces engine speed to reduce unnecessary fuel consumption and extend engine life.

To deliver maximum power for a wide range of applications, the SK260LC is powered by a six-cylinder **Iveco** diesel engine that is U.S. **EPA** Tier 3 certified. The turbocharged, fuel-injected engine delivers 181 hp (135 kW) and 597 lb-ft (809 N·m) at 1200 rpm. According to Paul Golevicz, Brand Marketing Manager at Kobelco, this output represents a 14% increase in engine torque and a 10% increase in swing torque compared to the current model, the SK250.

Four power modes on the new excavator allow the operator to match power to specific work operations. For heavy-duty excavation work, H Mode, which is the default mode, provides priority to the workload at high speed. S Mode provides fuel savings for standard digging and loading work. B Mode provides one-way hydraulic flow for breaker work, and A Mode provides two-way, two-pump flow for demolition work with the crusher/nibbler.

A power boost system provides 10% more power on command for increased bucket breakout force, without time limitations. The new excavator also provides 3400 lb (15 kN) more drawbar pull force compared to the previous model.

Viscous silicon cab mounts help to minimize vibration and shock to the cab, which has been designed to provide operator comfort, easy egress, and a clear view of the work site. A seven-position suspension seat can be adjusted to fit the comfort requirements of most operators, and all major controls—including hydraulics for tools and attachments, mode selection switches, and heavy lift and independent travel switches—have been placed to the operator's right for easy access.

To reduce maintenance time and boost productivity, most routine service check points on the SK260LC have been placed at ground level, along with ready access to filters, batteries, and hydraulics. Side-by-side radiator, oil cooler and intercooler are also easily accessible for inspection and cleaning. The radiator can be removed for service without the need to drain the hydraulic system.

The SK260LC Acera Mark 8 is designed for applications requiring maximum power, from digging trenches and carrying and setting pipe and trench boxes, to backfilling, clearing sites, and loading trucks. With an operating mass of 57,300 lb (26,000 kg), the SK260LC digs to 23 ft (7.0 m), and provides a maximum reach of 33.3 ft (10.1 m) at ground line. It provides a bucket digging force of 41,100 lb (183 kN) and an arm digging force of 28,500 lb (127 kN).

Darlene Fritz



Kobelco Construction Machinery America's new SK260LC Acera Mark 8 excavator features an intelligent total control system that provides smooth hydraulic response based on the operator's moves.



Four power modes on Kobelco's new excavator allow the operator to match power to the specific work task and conditions.

Dressta adds 555C Extra wheel loader

Dressta recently expanded its wheel loader lineup with the addition of the 555C Extra wheel loader. The 555C Extra features a new turbocharged diesel engine, single-phase torque converter, electrically controlled transmission, hydrostatic steering, and single-lever hydraulic controls.

Power is provided by a new turbocharged inline six-cylinder **Cummins** QSM11 engine that provides 319 hp (238 kW) at 2100 rpm and 1235 lb-ft (1674 N-m) at 1400 rpm. The 10.8-L engine is certified to meet U.S. **EPA** Tier 3 emissions regulations.

Dressta upgraded the 555C's hydraulic system and added a new cooling module to allow for a variable-speed cooling fan on the 555C Extra. At minimum usage, extra cooling provided by the fan allows an output of 330 hp (246 kW).

Engine power is matched to the load by a single-phase, single-stage torque converter with a 2.9:1 stall ratio. The 555C Extra's electrically controlled full power shift, countershaft transmission is driven by a double universal joint from the torque converter to provide smooth modulation on all shifts and a comfortable ride for the operator. The four-speed countershaft transmission allows gears to mesh continuously, so adjustments are effectively eliminated.

This machine's articulating frame provides articulation of 40° to the right or left and a tight 21.3-ft (6.5-m) turning radius. The 5264-lb (2388-kg) counterweight is standard. Heavy-duty axles incorporate full-floating axle shafts and a planetary final drive.



Dressta's newest wheel loader, the 555C Extra, features a turbocharged 10.8-L diesel engine, electrically controlled countershaft transmission, hydrostatic steering, and single-lever hydraulic controls.

Multiple wet-disc brakes are arranged in two independent hydraulic brake circuits—one in front and one at the rear. Brakes are completely sealed and force-cooled to reduce downtime and improve safety and reliability. Hydrostatic steering provides smooth control at any engine speed, and directional transmission and speed shift are controlled using levers mounted within the operator's reach.

Z-bar linkage design features a single-bucket cylinder that puts less weight on the front, reduces the number of compo-

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nents, and minimizes the number of wear and maintenance points. Loader linkage pins are sealed to keep out abrasive dust and grit, helping to extend lubrication intervals as well as pin-bushing life, and boom cylinders are mounted outside the front frame for easy access and maintenance.

Dressta's newest loader can be equipped with buckets ranging from 5.5 to 11.0 yd³ (4.2 to 8.4 m³) and has an approxi-

mate operating mass of up to 66,380 lb (30,110 kg). The cab offers high visibility in all directions and is equipped with a full complement of gauges and warning lights that allow the operator to monitor current operating conditions.

The 555C Extra is part of Dressta's complete wheel loader lineup, which includes the 515G, 520G, 530E, and 560E.

Darlene Fritz

Cat wheel loaders get new axles

Front differential lock, load-sensing hydraulics, and a new ACERT engine highlight **Caterpillar's** new 938H wheel loader and IT38H integrated toolcarrier. Locking differentials are designed to provide dependable tractive effort in poor underfoot or tough loading conditions, and the load-sensing hydraulics can help both loaders deliver improved cycle times. Additional features help to aid machine health monitoring and service.

Powered by a 6.6-L inline six-cylinder Cat C6.6 diesel engine, both loaders deliver 180 hp (134 kW). Certified to meet

U.S. **EPA** Tier 3 off-highway emissions regulations and international emissions standards, the engine is capable of maintaining peak engine power over a broader engine speed range as compared to the 938G II and IT38G II machines these loaders replace.

Equipped with the company's own ACERT technology, the C6.6 engine's cylinder head incorporates a new cross-flow design that facilitates air movement, and the turbocharger is equipped with a 'smart' waste gate that provides precise, reli-



Caterpillar's new 938H wheel loader features differential lock for both axles and load-sensing, variable-flow hydraulics for dependable tractive effort, increased rimpull into the pile, and a 16% increase in lift force compared to the previous models, according to Cat.



Cat's IT38H integrated toolcarrier and 938H wheel loader are both powered by a new 6.6-L diesel engine that features a new cross-flow cylinder head design and a smart waste gate turbocharger that provides precise, reliable control of the boost pressure.

able control of the boost pressure. ADEM A4, Cat's engine management electronic control module, monitors engine conditions and regulates fuel delivery and other parameters to manage load and performance. An engine idle management system maximizes fuel efficiency and offers four idle control speeds to meet application requirements. To feed the common fuel rail, the engine employs an oil-lubricated high-pressure fuel pump that has been designed to be tolerant of alternative fuels.

An electronically controlled variable-speed on-demand fan monitors and cools engine coolant, transmission oil, and air inlet manifold as needed. The cooling system is isolated from the engine compartment by an insulating, nonmetallic shield.

Both loaders feature countershaft powershift transmission, which was introduced with the previous series. Designed and built by Cat, the transmission features an automatic shift capability that allows full-power speed and directional changes, helping to boost cycle times and productivity. Control throttle shifting helps to regulate engine speed during rapid, high-

powered shifts to preserve component life and smooth out the shifting, and an electronic clutch pressure control system modulates the individual clutches.

Load-sensing variable-flow hydraulics supply hydraulic flow and pressure to the loader's implements only on demand, offering full hydraulic forces at any engine speed. Implement control is improved compared to the previous system with the incorporation of a new S3PC priority proportional pressure compensation valve that allows the simultaneous use of the raise/lower and rack back/dump functions. The new loaders provide increased rimpull into the pile and a 16% increase in lift force compared to the previous models, according to Cat.

Both loaders feature a new axle with front differential lock or an optional automatic differential lock for both front and rear axles. The automatic differential lock monitors machine operation and locks during the dig cycle or when tires slip. Locking the axles—whether automatically or manually—allows the loader to deliver improved traction with less tire wear, lower fuel consumption, and less generated heat. Differential lock, which replaces limited slip, can be engaged while the loader is in motion.

Rigidly mounted to the frame, the front axle supports the weight of the loader and withstands internal torque loads and external forces. The rear axle is designed to allow $\pm 12^\circ$ oscillation so all four wheels can remain on the ground when traveling over uneven terrain. The loaders' articulated frame incorporates a durable plate engine frame and a robotically welded two-plate loader tower. The solid-plate engine end frame resists twisting and distributes impact loads.

A two-piece counterweight is integrated into the loader's structure. Linkage for the 938H is a single-tilt Z-bar design, while the IT38H uses an integrated toolcarrier linkage and includes parallel lift for various materials-handling tasks.

Service points and sight gauges have been grouped together for easier daily servicing, and the grill and cooling cores swing out for cleaning. Other serviceability options include brake wear indicators, remote pressure taps, an automatic lubrication system, and SOS services, in which engine, transmission, and hydraulic oils can be sampled via easy-access valves for quick analysis.

The operator's cab includes a six-way adjustable seat with automotive-style lumbar support and adjustable armrests, maximized visibility to the bucket with distortion-free glass to the floor, optional rearview camera, and low-effort load-sensing steering with tilting steering column. Key machine controls have been located within the operator's reach, and implement pods have been restyled for operator comfort. A standard transmission switch allows operators to keep their hand at the implement control levers while making directional shifts, and an optional joystick with integrated forward-neutral-reverse switch can replace the lift and tilt levers.

An in-cab messenger display provides real-time data for monitoring machine performance, the engine, and other diagnostics. Cat Product Link, a standard feature, provides a two-way flow of information between the loader and the Cat dealer that is extended to the owner's desktop computer.

Darlene Fritz



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Vögele paver series offers new vision

Vögele America is expanding its product family in North America with the introduction of the Vision Series, its next generation of asphalt pavers. The series—completely new according to Vögele—includes the tracked Vision 5200-2 and the wheeled Vision 5203-2, and also features a number of Vögele Super Series technologies.

Vision Series pavers are powered by a six-cylinder **Cummins** engine that provides 240 hp (179 kW) at 2000 rpm. Operator-selectable speed ranges—MIN, ECO Mode, and MAX—can be chosen based on power, fuel consumption, and noise level requirements.



Vögele America's new Vision Series asphalt pavers include the tracked Vision 5200-2 (left) and the wheeled Vision 5203-2 (right).



Twin, raked exhaust pipes redirect exhaust, heat, and noise away from the operator and crew by reinforcing the impression of forward movement. Coolant, hydraulic oil, and charge air are controlled by a large cooler assembly with innovative air routing and a high cooling capacity.

Machine and hood have been sloped to maximize operator visibility for the sides, hopper, and rear conveyors. Operator stations swing out from both edges of the machine, for superior visibility, and the control console slides from one side of the paver platform to the other. An optional hydraulic front apron reduces shoveling in front of the paver by preventing forward spillage of asphalt mix; as the hopper closes, the front apron rises.

Self-diagnostics built into the new Vision Series allow operators to monitor fluid levels and other inspection points from a display panel. A clamshell hood opens completely to allow interior access to routine maintenance points from the deck and sides. Harnesses are simple, supported by the Vision Series' CAN bus system.

Three drive versions are available on the wheeled Vision 5203-2: one with rear-wheel drive, one with optional two-wheel front-wheel assist, and a new optional version, with six-wheel drive. For the Vision 5200-2, long crawler tracks with large ground contact provide maximum tractive effort. Reducing the clearance between track rollers and the rubber track to zero has allowed Vögele to eliminate misalignment of the rubber track while traveling, which results in accurate tracking with no bobbing and weaving. Tracks are driven and controlled independently, providing strong tracking stability and a precise turning radius. A strike-off plow or plate at the

very front of the paver is mechanically lowered to prevent the machine from going over a hump of material, or getting asphalt mix in the tracks.

Independently operated hopper wings allow the Vision 5200-2 and 5203-2 pavers to dump one side or the other, or both at the same time. Flow gates have been replaced by independent, reversible conveyor and auger drives, with each conveyor driven separately and independently from the auger.

Hydraulic cylinders keep the self-tensioning conveyors adjusted, which allows the crew to spend less time on the paver, and more time placing asphalt. Heavy, fold-up tool racks are

provided, and lockable compartments are available under the deck and each operator seat.

Driven by individual, closed-loop hydraulic drives, conveyors and augers are monitored and proportion-controlled to guarantee a constant head of mix in front of the screed. Hydraulic auger height adjustment helps to optimize spreading of the mix even when paving thin layers or on sections with varying layer thickness. Large 16-in (406-mm) diameter auger flights with precision pitch provide even spreading of the mix when paving in large widths or lower engine speeds. Conveyors and augers can operate in manual, automatic, or clean mode, which allows the augers and conveyors to run at a slow speed for easier cleaning at the end of a shift.

Three electric screeds will be available for the Vision Series pavers: **Carlson** EZ-III 1017 and EZ-IV 1019 screeds with front-mounted extensions, and the HR 500 E rear-mounted screed. No diesel-heated screeds will be available.

Push-button controlled paver functions are logically arranged and clustered in groups, and large, easy-to-read displays on the operator's and screed operator's consoles show critical paving data. The operator's console lights up automatically as darkness falls.

Vision Series pavers offer Pave Mode, a "smart" memory feature that stores the most recent settings for paver functions for future applications. Hydraulic screed hold and screed freeze functions prevent the screed from sinking after a paver stop, eliminating humps when resuming paving. Vögele's Niveltronic Plus provides automated grade and slope control.

Darlene Fritz

Komatsu upgrades wheel-loader lineup with new WA250-6

Boasting increased loading power and performance for a wide range of applications, **Komatsu** has introduced its WA250-6 wheel loader, which features a hydrostatic transmission system, variable traction control, improved operator comfort features, and the company's latest Komtrax technology.



Komatsu's new WA250-6 wheel loader features a hydrostatic transmission system, variable traction control with S mode for slippery conditions, and improved operator comfort features.

Replacing the WA250-5 wheel loader, the WA250-6 is powered by a six-cylinder, 6.7-L turbocharged Komatsu engine that is certified to U.S. **EPA** Tier 3 and EU Stage 3A, and delivers 138 net hp (103 kW) at 2000 rpm.

Komatsu's hydrostatic transmission system (HST) allocates power according to demand, transmitting it hydraulically to a transfer case, then mechanically out to the differentials and the four driving wheels. The one-pump, two-motor system automatically adjusts to tractive effort demand to provide quick travel response and aggressive drive into the pile. The system features full auto-shifting, which eliminates gear shifting so the operator can focus on the primary tasks of digging and loading.

Both motors are fed by the HST's single pump for tasks requiring high drive torque, such as digging, climbing, or initiating travel. The system responds to a reduction of torque demand, for example as a moving loader gains ground speed, by removing the low-speed motor from the drive system via a clutch; this reduces drag on the system as the flow goes only to the high-speed motor.

The HST system can also act as a dynamic brake on the mechanical drive system under conditions of deceleration, e.g. as the machine slows or completes a dig-and-lift operation. The dynamic brake can hold the loader in position on most workable slopes.

When traveling at a low speed, the machine's tractive effort can be reduced with the traction control switch, which can help to reduce tire slippage, especially in wet or soft ground conditions. By helping to eliminate excessive bucket penetration and tire slippage during stockpile loading, the system helps to improve work efficiency and extend the life cycle of tires. Tractive effort can be temporarily increased back up to 100%, for example for aggressive penetration into the pile, with a maximum tractive switch that is located on the work equipment control lever.

For snow-covered or other slippery surfaces, a new S-mode control helps to provide optimum driving force at low speeds by controlling engine speed and the HST motor; this mode is only available for forward travel.

Breakout forces as high as 27,210 lb (121 kN) are available with the new WA250-6, as well as a static tipping load of 26,367 lb (11,960 kg) on the straight and 23,204 lb (10,525 kg) on a 40° turn. The new wheel loader's operating mass ranges from 25,441 to 25,761 lb (11,540 to 11,685 kg), and it



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has a heaped bucket capacity ranging from 2.5 to 3.5 yd³ (1.9 to 2.7 m³).

Pressurized to suppress dust and reduce interior noise levels to below 70 dB(A), the WA250-6's cab also employs Komatsu's rollover/fallover protective structure viscous mounts to dampen noise, shock, and vibration, particularly in rough conditions. The loader's low-noise engine, hydraulically driven fan, and hydraulic pumps are mounted with rubber cushions, and large, rear-hinged cab doors open fully for easier entry and exit.

Work equipment is operated from a new multifunction loader control lever that incorporates a forward/reverse switch and an adjustable wrist rest. From the right-side control panel, the operator can select the speed range, maximum travel speed in first gear, tractive effort, and reversible fan setting.

The steering column, which incorporates an electronically controlled lever for directional changes, can also be tilted to accommodate operator position.

The WA250-6 is also equipped with Komatsu's equipment management monitoring system, which monitors critical systems and alerts the operator when action is needed. The controller monitors key engine features, displaying any abnormalities on an LCD screen, and also tracks and stores abnormalities and error codes for future review and analysis. Komatsu's latest-generation Komtrax system allows the loader to send a wide range of information to a secure website, including location data, error codes, cautions, maintenance items, fuel levels, and more.

Darlene Fritz

Case expands E Series wheel loader line

Case Construction Equipment recently expanded its E Series line with the introduction of the Case 621E wheel loader. The new loader features an electronically controlled engine, a new cab with greater operator comfort and visibility, and ground-level serviceability.

and performance by automatically transferring power from the wheel that is slipping to the wheel that is gripping.

Case engineered the Case 621E's operator environment around the same ergonomic design—incorporating large switches, simplified displays, and easy-to-read analog gauges—introduced with the 721E, 821E, and 921E models. The isolation-mounted cab features an infinitely adjustable seat, tilt steering column, armrests, and control placement that allow the cab environment to be adjusted to accommodate operator size and preferences.

Visibility has been maximized both forward and rear with floor-to-ceiling glass in the front and a sloping rear engine compartment, which also helps to increase visibility to the attachment and work site. The cab features strategically located air diffusers for maximum air circulation and faster,



The new Case 621E wheel loader offers three power curves and four work modes so operators can balance fuel economy with power demand based on the application.

A fully electronic 6.7-L U.S. **EPA** Tier 3 certified engine powers the Case 621E. The six-cylinder engine incorporates a new common-rail fuel-injection system and delivers 168 net hp (125 kW). The model allows operators to choose from among three power curves—max, standard, and economy power—and four work modes—max, standard, economy, and auto—providing the flexibility to match power and fuel economy to the application.

For high-production activities such as aggregates operations, the operator might choose to use maximum power to deliver the high requisite breakout force and fast cycling. For operations that involve hauling of lighter materials, economy mode would allow the operator to complete the task with the greatest fuel efficiency. In auto mode, the electronically controlled engine adjusts between power curves to move the maximum amount of material per gallon of fuel. When the machine is idling, it will automatically reduce the engine rpm, from 900 in maximum to 600 in low idle.

Limited-slip axles, standard on the 621E, improve traction



A one-piece electric lift hood gives operators and technicians easy access to the entire engine area.



Floor-to-ceiling glass in the front, along with a sloping rear engine compartment, gives the operator a panoramic view, with maximum visibility both forward and to the rear.

more-thorough heating and cooling, plus a thermal box that keeps food and beverages hot or cold, during long hours of operation.

The 621E also features easy access to fluid-level sight gauges, centralized grease fittings, and daily service check points that are visible from ground level. A one-piece electric lift hood gives operators and technicians easy access to the entire engine area.

Available in standard as well as XT (tool carrier) and XR (extended reach) configurations, the Case 621E shares the same rear frame as the 721E, so parts are common. A newly designed counterweight conforms to the rear of the machine, providing added ballast and good clearance, and a common E-Series interface allows operators to more easily switch from one machine to another.

Darlene Fritz

Counterbalanced lift trucks deliver Hyster performance

Hyster's upgraded S80-120FT and H80-120FT lines of sit-down, counterbalanced lift trucks combine a robust powertrain with industrial-strength hydraulics, a re-engineered cooling system, and ergonomic features. According to Hyster, the Fortis line's advanced features allow operators to decrease downtime by as much as 30%.



Available in cushion tire and pneumatic tire configurations, Hyster's S80-120FT and H80-120FT Fortis sit-down counterbalanced lift trucks can be tailored to a specific application and work environment with the selection of one of three preconfigured powertrain bundles.

seat, and improved brake pedal layout.

A CAN bus communication system helps to reduce maintenance time by providing real-time diagnostics plus reduced wiring and electrical connections. Onboard diagnostics and easy access to serviceable parts reduce repair time and extensive part swapping. An optional EZXchange facilitates easy LP tank replacement using an LP tank bracket that swings out from over the top of the counterweight and a gas-spring-assisted fuel cylinder that lowers into a reclined and locked position.

Darlene Fritz

Available in cushion tire (S80-120FT) and pneumatic tire (H80-120FT) configurations, the Fortis line of lift trucks can be tailored to a specific application and work environment by selecting one of three available packages: Fortis, Fortis Advance, and Fortis Advance+. Three preconfigured powertrain bundles are also available: standard electronic powershift, DuraMatch, and DuraMatch 2.

The counterbalanced lift trucks are powered by a **General Motors** 4.3-L V6 engine that is monitored and controlled by an onboard **Pacesetter** VSM computer. Auto deceleration automatically slows the truck when the accelerator pedal is released, which helps to extend brake life, and optional oil-cooled wet disc brakes can help to further reduce brake maintenance. A controlled power reversal feature helps to eliminate tire spin, which increases tire life by up to 50%, according to Hyster.

Hyster isolated the powertrain of its counterbalanced lift trucks to help avoid operator fatigue by minimizing the effect of powertrain vibration and road-borne shock. Additional ergonomic features include an adjustable steering column and 12-in (305-mm) steering wheel with spinner knob for improved steering response, rear drive handle, optional full suspension



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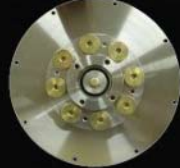
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