J&L OILFIELD SERVICES LLC
Shattuck, Okla., firm specializes in efficient land application of “cuttings” from oil- and gas-drilling wells

See article pg. 4
Dear Valued Customer:

The 2014 construction and energy market is trending toward stronger growth, especially in housing and the nonresidential markets. Forecasts suggest a 9-percent increase in residential/commercial construction this year. Certain markets, however, are unfortunately being adversely affected by political uncertainty. Among them is transportation infrastructure as the current highway bill expires in September and the Highway Trust Fund is expected to run out of money before that. We’re hopeful the Congress will pass legislation soon that provides long-term funding.

Last year, Komatsu introduced the first intelligent dozer, which drew rave reviews. Because these models were so well received, Komatsu has significantly expanded its intelligent Machine Control family. In this issue of the Kirby-Smith Machinery, Inc. Connection magazine, you can read about three new models that are available and provide good options for a variety of applications.

An Industry Standard story details how Komatsu met the stringent Tier 4 Final regulations on machines with 75-horsepower and above engines. Komatsu introduced its new intelligent machines and some Tier 4 Final products during CONEXPO. Of course, the other manufacturers that Kirby-Smith Machinery, Inc. represents unveiled several new products too, including the Wirtgen Group (Wirtgen, Hamm, Vögele, Kleemann), Manitowoc/Grove, Manitou/Gehl and Gradall. You will find information about some of them in this issue.

Kirby-Smith Machinery, Inc.’s commitment to you goes beyond carrying world-class products. We back them with exceptional parts and service support. Case in point is Major Wire, a line of screening media that customers in the quarry and mining industry appreciate because it offers greater productivity and longer wear life than traditional screens. An article inside explains more about Major Wire’s Flex-Mat® 3 products. There’s also an informative piece about Komatsu’s convenient epartscentral online parts ordering system.

As always, if there’s anything we can do for you, please call or stop by one of our locations.

Sincerely,

KIRBY-SMITH MACHINERY, INC.

Ed Kirby,
President
IN THIS ISSUE...

J&L OILFIELD SERVICES LLC
Read about this Shattuck, Okla., firm, which specializes in efficient land application of “cuttings” from oil and gas drilling wells.

PRODUCT FOCUS
See how Major Wire’s innovative Flex-Mat® 3 virtually eliminates blinding and pegging during screening.

NEW PRODUCTS
Check out Gehl’s newest track loader models – the RT175 GEN:2 and the RT210 GEN:2.

INNOVATIVE PRODUCTS
Learn about three new intelligent Machine Control dozers that provide automatic blade control from the first pass to the last.

MORE NEW PRODUCTS
Find out how the new Komatsu PC88MR-10 bridges the gap between compact- and construction-size machines.

REACHING NEW HEIGHTS
Manitowoc introduces new crawler cranes with breakthrough Variable Position Counterweight.

A CLOSER LOOK
Discover how Wirtgen’s WR 250 can easily power through difficult soils and pavements.

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Not all products represented at all locations.
J&L OILFIELD SERVICES LLC

Shattuck, Okla., firm specializes in efficient land application of “cuttings” from oil- and gas-drilling wells

When Owners Lance Schultz and Jason Swanson founded J&L Oilfield Services LLC in 2002, their goal was to service 10 drilling wells. They have long surpassed that mark, and along the way have built a business that’s changing the landscape when it comes to disposing of the cuttings from oil- and gas-drilling wells.

Based in Shattuck, Okla., J&L Oilfield Services provides land application services of “cuttings” or “drilling mud” from drilling sites. It handles two types of cuttings: water-based and oil-based. Water-based mud is directly applied to existing ground. Oil-based mud is blended with a mixing agent, such as low-grade lime, before application. Additionally, the company hauls water from drilling sites to its own disposal wells.

J&L Oilfield Services works with a large list of customers, mainly in western Oklahoma and the panhandle of Texas, servicing nearly 70 wells. It employs about 400 people, and in addition to its headquarters in Shattuck, the company has yards in Enid, Chickasha, Burns Flat, Cheyenne and Vici. It services more than 35 percent of the active rigs in Oklahoma and more than 4 percent of the active rigs in the United States.

“Last year was a record year for us on several fronts,” said Schultz. “Our employee list increased to nearly 400, our hours of service jumped 20 percent, and we logged a record number of miles traveled. More importantly, our safety record continued to shine. Our total recordable incident rate was well below the national average. We also maintained our record of zero regulatory fines since we founded the company.”

“Our adage is ‘Let’s do what is right!’” added Swanson. “We follow that philosophy in everything we do, from the safety of our work force and practices to providing the most environmentally sensitive way of disposing of the cuttings. We carefully plan to ensure sustainability and minimize impact.”

J&L Oilfield Services takes a diligent approach to cutting disposal, starting with assessing the land where it will apply the cuttings. The company takes samples from a potential disposal site and tests the existing soils in its lab. It also coordinates with independent labs to conduct soil and waste research.

“We want to ensure the land can handle the cuttings with no detrimental effects,” said Schultz. “If it’s all right, we’re good to go. We apply the cuttings right on top of the existing ground. Under most conditions, the area where we place the cuttings will be back to original ground level within a few months.”

Launches ECO¹

J&L Oilfield Services pioneered innovation in environmental sensitivity when it introduced its patent-pending ECO¹ land application system a few months ago. During development, the
A J&L Oilfield Services operator uses a Komatsu WA320 wheel loader to blend a mixing agent with oil-based drill cuttings before they are applied to a field near Shattuck. "Komatsu equipment is durable, which is a big plus because our applications can be very tough on machinery," said Owner Lance Schultz.

Go online or scan this QR code using an app on your smartphone to watch video.

J&L Oilfield Services uses a variety of Komatsu equipment, including this D65EX-17 dozer, as well as a D51EX-22, for leveling and ripping.

company conducted a massive drilling-waste analysis and coordinated and completed multiple university research projects that analyzed total petroleum hydrocarbon degradation and salt leaching.

"Traditional waste management presents challenges, including the chance that even the most skilled operators will make mistakes that could have negative impacts on the environment," said Swanson. "We designed ECO¹ to mitigate that possibility through automated application management. It starts with capturing site-specific characteristics, such as vegetation, slope, sensitive areas and site perimeters, on a mobile mapping device. It's similar to GPS systems for planting and fertilizing on a farm or preparing a construction site."

Armed with the information, site specialists can establish an application plan. The system’s control center combines site-suitability findings, lab analysis and regulatory standards and sediment-trapping calculations to create application instructions that are wirelessly transmitted to the company’s fleet of trucks. When an application begins, the instructions automatically govern the application rate and material placement, and it ceases if a boundary is breached or if rates approach regulatory or environmental limits.

“We believe this revolutionizes waste disposal from an oil- and gas-drilling standpoint," said Swanson. “It also has applications for mining or other industries that produce waste. For instance, we can conduct a land analysis to determine if an area is suitable to take iron-rich waste from a mine. The earth will take back the natural products it produces, and ECO¹ determines the proper rate to apply it. It’s true recycling.”

**Greatest assets**

J&L Oilfield Services Soil Scientist Daniel Kelln helped develop ECO¹. He’s one of several staff members who have worked for the company for a decade or more. Original employee Bill McClain is now J&L’s Data Analyst, and Bryan Appel, the business’ second hire, is now Parts Manager. Other key personnel includes Operations Manager Tom Schickedanz and Asset Manager Hugh Landers.

“Lance and I have our defined roles. He handles equipment, building, purchasing and buying, while I oversee our field operations,” said Swanson. “We wouldn’t be able to do our jobs as effectively without having a terrific staff Continued . . .
that’s as dedicated to J&L’s success as we are. We have high expectations, but our employees consistently meet them. Our aim has always been to find the best people and take care of them. They are J&L’s greatest assets. We have very little turnover, so our plan is working."

Reliable Komatsu equipment

Schultz and Swanson also think highly of Komatsu equipment, which J&L Oilfield Services began using about eight years ago. It started with a WA320-5 wheel loader, which the company still owns. Working with Kirby-Smith Machinery, Inc. Territory Manager Dean Traylor, J&L acquired additional loaders, mainly WA320s and WA380s, two excavators (PC210LC-10 and PC200) and recently a D65EX-17 dozer.

“We bought our first Komatsu loader in 2006, and now it has about 6,000 hours on it,” said Schultz. “Other than routine service, nothing has been done to it. Based on the production and minimal downtime from that machine, we added more Komatsu equipment, and we have been just as pleased as we were with our first purchase.”

Wheel loaders and excavators are used to load cuttings onto trucks. Loaders are also used to blend mixing agents with oil-based cuttings. J&L Oilfield Services uses the D65EX-17 to rip materials that are used in the mixing process and also uses it to level during land application.

“Komatsu equipment is durable, and that’s a big plus because our applications can be very tough on machinery,” said Schultz. “It’s rare that we have an issue, but if we do, I know I can call Kirby-Smith, and they’ll take care of it right away, either out of their Oklahoma City or Amarillo branch. With the new Tier 4 machines, Kirby-Smith handles the routine services through Komatsu CARE, which is an added bonus that saves us in terms of owning and operating costs. They call us to let us know it’s time for a service and schedule the work at our convenience. Service like that only strengthens the already great relationship we have with Dean, Kirby-Smith and Komatsu.”

Expanding opportunities

J&L Oilfield Services continues to look for new avenues to expand and streamline its processes. Its initiatives for 2014 include fully integrating E-tickets and further implementation of ECO².

“We have plans to grow our rig counts, which in turn will further our need for more people and machinery,” said Swanson. “I can see us expanding our territory as well, moving into more states, and ECO² taking an increasingly larger role in our operations. Our goal is to move into new markets, such as spill remediation, land applications in municipalities and other areas.”

“We’ll approach everything we do in the same way we always have – in a safe and professional manner,” added Schultz. “At the end of last year, we completed nearly 4,000 jobs with zero citations, and we expect that to continue to be the case. We’re determined to maintain a high standard of excellence for ourselves and for J&L as a company.”
Production is the name of the game when it comes to screening material, so you want screening media that’s the most effective at maximizing your performance. Major Wire has the screen media solutions to achieve your goals with an innovative lineup of products designed for increased capacity and long wear life, including its revolutionary Flex-Mat® 3 self-cleaning line.

“Flex-Mat 3 virtually eliminates blinding and pegging, resulting in greater production and higher-quality end products compared to traditional screen media,” said Kirby-Smith Machinery, Inc. Product Support Representative Tom Costello. “Customers who switched to Flex-Mat 3 increased their tons-per-hour rates and reduced their downtime cleaning screens, lowering their cost per ton.”

Most commonly applied in D-, T- and S-series, Flex-Mat 3 increases material throughput by up to 40 percent and provides up to 30 percent more screen capacity than traditional woven-wire screen media. The Flex-Mat 3 L-series features high-performance individual harp or piano wire that is firmly molded into polyurethane strips, eliminating the steel-on-steel wear associated with traditional harp wire and providing up to twice the life. Every wire is equally tensioned, which increases the overall efficiency of the screen to produce spec material.

“In order for customers to choose which Flex-Mat 3 screen media is right for them, we conduct screening plant audits that are designed to evaluate their needs and ensure the Flex-Mat screen or screens they choose are the best fit,” said Jerry Teague, Territory Manager for Major Wire. “We’re committed to our customers’ success by delivering the highest-quality products backed by superior service.”

A key component of Major Wire’s durability is its OptimumWire®, which is manufactured with a higher carbon and manganese content than traditional woven wire for greater resistance to abrasion. High ductility, hardness and tensile strength make it less susceptible to breaking in high-impact conditions. Additionally, OptimumWire lasts longer; it has up to 40-percent longer wear life, and minimizes maintenance and lost-production costs when replacing a traditional woven-wire screen of the same wire diameter. Costello said users who replace woven-wire screens with Flex-Mat 3 screens with OptimumWire are seeing up to four times the wear life.

Major Wire products are now available at all Kirby-Smith Machinery, Inc. locations. “Tom and Kirby-Smith are doing a tremendous job of showing customers Major Wire’s benefits, and that’s why we recently expanded Kirby-Smith’s territory,” added Teague. “I encourage anyone who screens sand, gravel, coal, slag or a wide range of other materials, to contact Kirby-Smith for more information or to set up a demonstration.”

Flex-Mat® 3 screening media virtually eliminates blinding and pegging, allowing for increased material production and decreased downtime associated with cleaning and replacing screens.
TOGETHER FOR THE LONG HAUL

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Gehl ushers in its next generation of RT models with RT175 GEN:2, RT210 GEN:2

Gehl is an industry leader in innovative skid steer and track loader machinery. Now, its next generation of tracked models is available with the introduction of its RT175 GEN:2 and RT210 GEN:2, which provide excellent lift capacity and lifting heights of more than 10 feet, 6 inches.

Gehl’s new GEN:2 models come equipped with horsepower management that monitors and adjusts the hydrostatic drive pumps to produce ideal tractive effort for construction, landscaping, agriculture, energy and a wide range of other applications. Switching attachments to match the application is now even easier with Gehl’s manual Quick-a-Tach™ or electronic Power-a-Tach™ attachment systems. The electronic attachment control with 14-pin connector is a factory-installed option on these models.

The GEN:2 models are also equipped with high-power auxiliary hydraulics for excellent attachment performance. The RT175 GEN:2 standard flow is rated at 18.5 gpm and high flow is rated at 34 gpm. The RT210 GEN:2 is rated at 21.8 and 35.9. Additionally, new steel hydraulic lines provide a cleaner design and eliminate hose tears and wearing.

**Standard straight tracking**

Straight tracking is now standard, which allows operators to make adjustments to machine tracking from within the cab, keeping the GEN:2 loaders on a straight path at all times. This new feature eliminates unnecessary servicing, which saves time and operating expense.

Customers will also find time and cost savings with Gehl’s patented IdealTrax™ automatic track tensioning system that eliminates manual track tensioning and increases the life of the tracks, sprockets and bearing. IdealTrax™ relieves tension when the engine is shut off, which extends track life by up to 15 percent.

When the machine needs service, the IdealTrax™ system makes track removal easy. A switch at the rear of the machine relaxes the tension, allowing the track to be removed in a matter of minutes with minimal tools in the field. Competitive models can require up to two hours for the procedure, and the work often has to be done in a service area.

“Customer input is very important to us, and we have used that input to build the next generation of track loaders,” said Brian Rabe, Manager of Product Development. “The RT175 GEN:2 and RT210 GEN:2 track loaders not only come with Tier 4-certified engines, but also provide additional features to keep operators comfortable and many other significant improvements based on customer feedback.”

<table>
<thead>
<tr>
<th>Model</th>
<th>Gross Horsepower</th>
<th>Lift Height</th>
<th>Rated Operating Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT175 GEN:2</td>
<td>69.9 hp</td>
<td>127.5 in.</td>
<td>1,750 lbs.*</td>
</tr>
<tr>
<td>RT210 GEN:2</td>
<td>72 hp</td>
<td>128 in.</td>
<td>2,100 lbs.*</td>
</tr>
</tbody>
</table>

*At 35% of tipping load

Gehl’s new RT210 GEN:2 is one of two next-generation track loaders that feature high lifting heights, excellent lift capacity and Gehl’s patented IdealTrax™ automatic track tensioning system.
Komatsu introduced intelligent Machine Control (iMC) to the dozer market about a year ago with its innovative D61i-23 model that features fully automatic blade control from rough-cut to finish grade. It’s now expanded the lineup with three new dozers – a D51i-22, a D39i-23 and a D37i-23.

All iMC dozers are available in longer track-on-ground standard EX and low-ground-pressure PX versions, which offer flotation and weight distribution options that best match user applications.

“These new dozers feature the same intelligent Machine Control technology that made the Komatsu D61i-23 such a success,” said Peter Robson, Director, Intelligent Machine Control. “With the same slant-nose and cab-forward design, they provide excellent visibility to the blade and all around the machine for superior operator productivity. The simple operation, efficiency improvements and greater value reflect the quality that customers expect from Komatsu.”

Like the D61i-23, the new iMC models feature fully automatic blade control from initial rough-cut to finish grade. As they travel around the jobsite, the dozers measure actual elevations, which provide accurate surface data. A stroke-sensing angle cylinder measures the actual angle of the blade for high-precision grading accuracy on cross-slope, whether the blade is angled or not. The iMC models are significantly more efficient compared to conventional aftermarket machine-control systems, depending on factors such as operation and conditions.

“During rough cut, if the system senses the blade has excess load, it automatically raises the blade to minimize track slip and maintain forward momentum,” said Robson. “The blade also automatically lowers to push as much material as possible, so it’s designed to maximize production under all situations.”

Operators can select different dozing modes, which tailor the system response to the machine operation, and therefore, optimize performance. Operators can also adjust the blade-load settings to match actual material conditions for added efficiency.

Unlike traditional GPS systems, Komatsu’s iMC dozers’ machine control system components are factory-integrated,
pushed us to quickly expand this family of crawler dozers,” added Robson. “All of the intelligent dozers provide excellent and efficient production in residential, commercial, road building, landscaping and other applications. Customers just have to decide which size or sizes best fit their business.”

“The integrated system reduces maintenance costs as well as risk,” said Robson. “Masts are not out on the blade and cables aren’t dangling between the blade and the cab, so the chance of damage or theft is eliminated. Personnel don’t have to spend time removing and reinstalling those components every day, which increases production. Finally, no one is climbing on the machine or blade to install and remove the mast and cables. We’ve eliminated the three Cs: cables, climbing and connections.

“We were excited to bring Komatsu’s intelligent Machine Control technology to the market last year, and the overwhelmingly positive response from our customers

<table>
<thead>
<tr>
<th>Model</th>
<th>Horsepower</th>
<th>Operating Weight</th>
<th>Blade Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>D37EXi-23</td>
<td>89 hp</td>
<td>18,872 lbs.</td>
<td>2.5-2.78 cu. yd.</td>
</tr>
<tr>
<td>D37PXi-23</td>
<td>89 hp</td>
<td>19,533 lbs.</td>
<td>2.5-2.78 cu. yd.</td>
</tr>
<tr>
<td>D39EXi-23</td>
<td>105 hp</td>
<td>20,922 lbs.</td>
<td>2.5-2.78 cu. yd.</td>
</tr>
<tr>
<td>D39PXi-23</td>
<td>105 hp</td>
<td>21,848 lbs.</td>
<td>2.5-2.78 cu. yd.</td>
</tr>
<tr>
<td>D51EXi-22</td>
<td>130 hp</td>
<td>27,381 lbs.</td>
<td>3.5-3.80 cu. yd.</td>
</tr>
<tr>
<td>D51PXi-22</td>
<td>130 hp</td>
<td>29,057 lbs.</td>
<td>3.5-3.80 cu. yd.</td>
</tr>
<tr>
<td>D61EXi-23</td>
<td>168 hp</td>
<td>39,441 lbs.</td>
<td>4.5-5.1 cu. yd.</td>
</tr>
<tr>
<td>D61PXi-23</td>
<td>168 hp</td>
<td>41,381 lbs.</td>
<td>4.5-5.1 cu. yd.</td>
</tr>
</tbody>
</table>

Komatsu’s intelligent Machine Control lineup now features four models, including the new D39PXi-23. All have integrated technology that provides automated grading from rough-cut to finish grading.
Komatsu introduced its first intelligent Machine Control (iMC) dozer, the D61i-23, about a year ago. Unlike traditional GPS add-on systems that are typically used for finish grading, the D61i-23 provides automatic dozing from rough-cut to final pass with an integrated system that eliminates masts and cables.

During rough dozing, the automatic blade control monitors the blade load and adjusts the blade elevation to minimize track slip for highly efficient dozing. Closer to finish grade, automatic blade control adjusts accordingly to provide finish-grade performance with high-level precision. The intelligent machines are significantly more efficient compared to machines using add-on control systems.

“It definitely saves us time,” said Andy Smith, Operations Manager of Sellers Contracting Services, LLC. “The operator doesn’t have to worry about how deep he’s cutting. He’s not moving his arm up and down trying to control the blade, because the machine does it all for him. From our experience, the accuracy has been dead-on. We’ve had projects where surveyors check behind us on building pads and even roadways, and it’s always been extremely accurate.”

Aspen Construction rented a D61i-23 during a road reconstruction project that involved rough cutting heavy peat and placing about 76,000 tons of road base once subgrade preparation was done.

“It powered through the tough materials with minimal track slip, and did a perfect job during the finish portion of placing the road base,” said Aspen Construction Estimator/Project Manager Ryan Blank. “It was an amazing machine. We loved it.”

Todd Sattler, Superintendent of CL Trucking, likes the accurate grading and the integrated system.

“The biggest advantages with an integrated machine over a bolt-on application are: safety, because no one is climbing on a machine; cost savings, because we won’t have broken wires or damaged parts; and time savings, because the time for setup, teardown and redesign on each jobsite is gone,” said Sattler. “Now we’re able to move the machines around, integrate them quickly to a new jobsite and change operators frequently without any production loss.”

Komatsu introduced its intelligent Machine Control (iMC) dozer line with the D61i-23 about a year ago. It provides automatic blade control from rough-cut to final pass, with an integrated GPS system that eliminates masts and cables.
Next Generation Machine Control

No Masts | No Cables | No Connections

Factory installed Intelligent Machine Control — standard on the new D61i-23. Automated dozing — 1st to last pass with finish grade performance. Intelligent blade assistance minimizes track slip and improves efficiency.

Komatsu — Customer driven solutions.

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The curtain has dropped on Tier 4 Final, and Komatsu opened its show with a new PC88MR-10 excavator that provides power and production in both open-area and confined-space applications. It has a nearly 10-percent increase in operating weight compared to the previous model.

“Our PC88 remains popular because it is a productive, dependable and efficient machine in construction, utility and landscaping applications,” said Rob Orlowski, Product Manager, Excavators. “It’s a ‘bridge machine’ between compact and construction-size excavators. It works equally well digging close to a building or in a lane of traffic as it does digging a utility line or a foundation without obstructions. In a variety of applications, it maintains excellent lift capacity and stability.”

The PC88MR-10 provides a maximum digging depth of 15 feet, 2 inches and a maximum reach of 23 feet, 5 inches. A swing boom allows for work in confined spaces, letting the operator focus on tasks in the front with less worry about counterweight impacts.

Improved versatility and productivity

A new Operator Identification System records and reports key operating information, so owners and equipment managers can more easily track individual operator performance. Operators simply enter a personal ID into the 7-inch, high-resolution monitor that features enhanced capabilities such as an adjustable Auto Idle Shutdown function that helps reduce idle time and operating costs.

Operators have six working modes to match hydraulic power to the job for even greater efficiency. Standard auxiliary flow can be changed to bidirectional for attachment flexibility, and a new enhanced attachment control lets users store up to 10 attachments in the monitor.

“We took what was already a great machine and made it even better with enhancements that can reduce owning and operating costs through increased efficiencies,” said Orlowski. “We believe individuals who need a compact excavator that provides powerful performance in a variety of tasks will find the PC88MR-10 a great fit for their businesses.”

**Quick Specs on the Komatsu PC88MR-10**

<table>
<thead>
<tr>
<th>Model</th>
<th>Horsepower</th>
<th>Operating Weight</th>
<th>Digging depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC88MR-10</td>
<td>65.5 hp</td>
<td>18,739-19,290 lbs.</td>
<td>15 ft., 2 in.</td>
</tr>
</tbody>
</table>

Komatsu’s new Tier 4 Final PC88MR-10 provides powerful performance in both confined-space and open applications. The tight-tail-swing design works well on construction, landscaping, utility and other excavating jobs.
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ESCO excavator buckets are trusted for productivity and reliability. Precision engineered, our buckets feature the ESCO Ultralok® tooth system with its integrated hammerless lock that offers safe and easier tooth replacement. These features combined with premium materials and skilled fabrication; deliver one of the most durable, high performance buckets available.

Ultralok Tooth System

HDP Bucket

XDP Bucket

Contact Kirby-Smith Machinery, Inc. for expert guidance and service to meet your excavating needs.

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Komatsu Dash 10 excavators provide increased horsepower, improved operator comfort and reduced fuel consumption. The excavator experts at Komatsu can help you complete jobs more quickly, while lowering your fuel and maintenance costs.

- Efficient Komatsu Tier 4 Interim engines and advanced hydraulic systems maximize productivity while providing up to 10% lower fuel consumption.
- Enhanced operator environment improves comfort and machine control.
- Komatsu CARE provides complimentary Tier 4 maintenance, including KDPF exchange filters. Contact your Komatsu distributor for details.
Innovative and ground-breaking are words often used to describe new equipment, but both are especially appropriate for Manitowoc’s MLC300 and MLC650 crawlers, which feature Variable Position Counterweight (VPC) technology that gives the cranes the strongest load charts in their classes, while significantly reducing owning and operating costs.

VPC technology moves the counterweight along a rotating bed and automatically positions it based on changes in boom angle, which eliminates the need for carbody counterweights. Advantages include reduced ground preparation, lower ground-bearing pressure and less counterweight without sacrificing capacity. Customers will not have to buy, transport or install as much counterweight compared to traditional configurations.

“The changes VPC technology brings to the crane industry can’t be overstated,” said Kirby-Smith Machinery, Inc. Territory Manager Bruce Bayless, who’s worked in the crane industry for nearly 40 years. “It all starts with less counterweight compared to traditional cranes, so transporting them to the jobsite takes fewer trucks and lowers mobilization costs. Reduced ground pressure equals less ground preparation with rock or matting, further minimizing costs. Manitowoc adds the benefit of interchangeable counterweights that work with multiple crane sizes, so a company with a fleet of these won’t need a complete set for each one.

“These cranes are revolutionary in an industry that has seen relatively few big changes with the exception of introducing hydraulics,” added Bayless. “The MLC300 and the MLC650 are game changers and a real evolution. Manitowoc set a new standard.”

An optional VPC-MAX is available on the units. Unlike the standard VPC counterweight movement, which is dictated by changes in boom angle, VPC-MAX is dictated by load and radius. Prior to extension, the counterweight tray moves to the end of the VPC-MAX beam, minimizing tail swing and increasing mobility.

Manitowoc designed the cranes for efficient transport and setup, with removable live masts and boom-hoist modules that reduce transport weight and self-erect mast cylinders and hooks. Fast Aligning Connection Technology (FACT™) connected boom inserts and FACT™ connect crawlers aid in safe, quick assembly. Also common to both is a Vision cab with the Crane

Quick Specs on the Manitowoc MLC300 and MLC650

<table>
<thead>
<tr>
<th>Model</th>
<th>Max Capacity</th>
<th>Max Boom Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLC300</td>
<td>330 tons</td>
<td>315 ft.</td>
</tr>
<tr>
<td>MLC650</td>
<td>716 tons</td>
<td>341 ft.</td>
</tr>
</tbody>
</table>

Manitowoc’s new MLC300 (left) and MLC650 feature Variable Position Counterweight (VPC) technology and are ideal for energy-related projects as well as infrastructure applications. Their smaller footprint plus the VPC system enables the cranes to easily move around the jobsite.
The MLC300 comes with a crawler-tensioning system – a dedicated, hydraulically activated cylinder and hydraulic supply. The system allows independent track-tension adjustment via crane setup remote and standard hydraulic connection.

“The MLC300 and MLC650 work well in practically any industry, including industrial, infrastructure and energy,” said Bayless. “The MLC300 would also work well on a barge, where cranes are typically used with a ringer attachment. It could be a good update to those older machines.”

“We talked with several customers at CONEXPO where the cranes were introduced, and the interest was very high,” said Kirby-Smith Machinery, Inc. Vice President and Crane Division Manager Ben Graham. “We’re pleased to align ourselves with industry-leading manufacturers such as Manitowoc. I encourage customers to call us for additional information.”

A crane can only be as good as the sum of its parts. That’s why Manitowoc Cranes built a multimillion dollar, state-of-the-art Product Verification Center (PVC) to rigorously scrutinize the components that go into its cranes.

The PVC helps produce stronger, more reliable cranes. Rigorously testing component performance and working cycles gives Manitowoc engineers insight into the cranes’ anticipated performance in the field. It also speeds up product development for new designs; reduces warranty claims and on-site stoppages; and allows for the direct comparison of supplier components. Additionally, the center features a number of technologies that deliver detailed pictures of anticipated component performance.

Manitowoc can now test designs earlier in the product-development process, which means suppliers and their components can be vetted before the products are placed in the cranes. The head start allows engineers to discover any potential difficulties at an earlier stage and devise solutions long before equipment reaches jobsites.
Hit the ground running with LeeBoy/Rosco.

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Increase productivity and reduce operating costs with LeeBoy’s 8515C Asphalt Paver. The 8515C incorporates big-paver features into a heavy-duty maneuverable package designed for production and reliability. It includes an 8- to 15-foot heated and vibrating Legend screed system, powerful 84-hp Kubota engine, dual operator controls and high-deck/low-deck configuration. Now available with the new, heavy-duty 815 electric screed.

Maximizer 3 Asphalt Distributor
Rosco’s Maximizer 3 asphalt distributor features an extendible spraybar that smoothly and efficiently moves from 8-foot to 16-foot width in 4-inch increments. The EZ Spray extendible spraybar makes radius and taper spraying, along with maneuvering for obstacles such as bridges, a smooth and efficient operation.

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If you perform cold in-place recycling and/or soil stabilization, you want exceptional performance, efficiency and simple handling in a productive package. Wirtgen’s new WR 250 delivers, with high engine output and optimal traction.

Wirtgen’s WR 250 is the highest-performing machine of the new WR generation, and it effortlessly works its way through heavy soils or existing failed pavements, homogeneously mixing or performing in-place cold recycling with dry lime or cement, lime or cement slurry or asphalt emulsion. Also, when equipped, it can perform in-place foamed asphalt or foamed bitumen recycling of existing failed pavements.

The WR 250’s 766-horsepower engine provides plenty of power for work in difficult soils or pavements, at widths of nearly 8 feet and depths up to 22 inches. The cutting-drum design is tailored to high performance for exceptional mixing quality and speeds.

“The WR 250 works great in a variety of conditions, and users can easily match it to the conditions with 12 available speeds, a variable cutting chamber and a deep cutting depth,” said Jim Holland, Wirtgen District Sales Manager. “It provides total mix and excellent gradation. The WR 250 is a high-volume machine, so it’s very productive.”

Operators control all base functions using a sensitive, multifunction joystick on the right armrest. Automated processes, such as automatic lowering and raising of the milling and mixing rotor, the ergonomically designed workplace and the innovative reverse-assist also provide enhanced productivity.

A glassed-in, large-capacity cab, work-zone camera system and 90-degree rotating driver’s seat ensure the best visibility conditions of both the WR 250 and the project site.

“Multifunctional machines make a big difference to the bottom line,” said Gary Corley, Kirby-Smith Machinery, Inc. Paving Specialist. “The WR 250 provides outstanding results, with high productivity and efficiency. I encourage anyone who performs paving or construction applications that require soil stabilization to check out the WR 250.”

### Quick Specs on the Wirtgen WR 250

<table>
<thead>
<tr>
<th>Specification</th>
<th>Specification Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>WR 250</td>
</tr>
<tr>
<td>Horsepower</td>
<td>766 hp</td>
</tr>
<tr>
<td>Working Width</td>
<td>7 ft., 11 in.</td>
</tr>
<tr>
<td>Working Depth</td>
<td>22 in.</td>
</tr>
</tbody>
</table>

Wirtgen’s WR 250 cold in-place recycler/stabilizer delivers exceptional performance, efficiency and simple handling in a productive package with high engine output and optimal traction.
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The world’s #1 brands for road building.

Rely on the Wirtgen Group’s full range of products for new construction and rehabilitation of roads. Our sales and service experts, based close to your doorstep, offer the expertise and all-round support you need.

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MORE EFFICIENT CRUSHING

Kleemann’s new, powerful mobile jaws and impactors provide greater versatility, mobility

High production capacities and material quality are essential in mobile crushing. Kleemann (part of the Wirtgen Group) provides those attributes, as well as increased efficiency and versatility with its new lineup of impact and jaw crushers that feature Tier 4 Final engines.

“All of the new models have prescreens that can be configured with varying size punch plates or grizzlies, and changing between them is easier than ever with a new common frame that allows users to unbolt one and bolt on another,” said Jim Holland, Wirtgen District Sales Manager. “Users no longer need to install a whole new frame system, and for the contractor who moves from site to site with different materials, that’s greater flexibility, efficiency and increased production time.”

Both impact and jaw models use direct-drive crushers and electric drives for the vibrating conveyors, belts and prescreens. The combination provides extremely efficient operation with low fuel consumption and optimal crusher loading.

“Kleemann separates itself from the competition with its prescreens because they significantly save wear on the crusher,” said Harold Clemons, Kirby-Smith Machinery, Inc. Aggregate Specialist. “It also has great fuel savings. Kleemann was already the most fuel-efficient, and with these new machines, it’s even better.”

Each model features Kleemann’s Continuous Feed System (CFS) that manages a more equal loading of the crusher area. The conveying frequencies of the feeder trough and prescreen area adapt independently of each other to the level of the crusher, which significantly boosts performance.

Kleemann’s new Mobicat jaw crushers are completely redesigned, heavier jaws that provide production up to 300 tons per hour. They have a newly designed, longer swing jaw and an extra-long and articulated crusher jaw.

| Quick specs on the new Kleemann crushers                                      |
| Model             | Type      | Feed Capacity |
| MC 110 Ri EVO     | Jaw       | Up to 300 tph |
| MC 110 Zi EVO     | Jaw       | Up to 300 tph |
| MR 110 Zi EVO     | Impactor  | Up to 450 tph |
| MR 130 Zi EVO     | Impactor  | Up to 450 tph |

Continued…
Kleemann takes crushing to the next level

Redesigned jaws

Kleemann expanded its popular EVO Contractor Line with two completely redesigned jaw crushers (a MC 100 Ri EVO and a MC 110 Zi EVO), with heavier jaws that provide production up to 300 tons per hour. They have a newly designed, longer swing jaw that prevents blocking of coarse material and moves all mounting elements of the crusher jaw from the wear area. The crusher jaw is extra-long and articulated. Transfer from the prescreen or the feeder trough is designed so that material simply tilts into the crushing jaw, which provides even material flow.

Medium and smaller gradations of material bypass the crusher, reducing wear in the system and increasing end-product quality through the discharge of fines via the side discharge conveyor. A bypass flap provides easy diversion of the material flow, eliminating the need for a blind deck and improves versatility in making base material. A folding, or short, conveyor option allows users to build a prescreen pile that exceeds competitive models.

“Despite the heavier jaw, they’re lighter than their predecessors for easier mobility,” said Holland. “Kleemann also improved transport with the folding conveyor that doesn’t require removal for transport.”

Impactors designed to improve material shape

New impact crushers are differentiated by their size and productivity. The MR 110 Zi EVO 2 has a crusher inlet opening of 43.3 inches, while the MR 130 Zi EVO 2’s inlet opening is 51 inches.

Feed capacities are up to 350 tons per hour (tph) for the MR 110 Zi EVO 2 and 450 tph for the MR 130 Zi EVO 2. The “S” indicates a Mobirex unit with an optional, highly productive secondary vibrating screen with an extra-large screening surface mounted on the discharge conveyor. It can produce spec material, potentially eliminating the need for a separate screen.

The impactors’ inlet geometry allows better penetration of the material into the range of the rotor, and the wear behavior of the new C-form impact ledges has been improved so that the edges remain sharper longer, leading to improved material shape. Rotor ledges are held securely by a new, user-friendly clamping system that can be changed faster for greater plant uptime. Rotor speeds can be adjusted in four stages to suit different processing applications.

The feeding unit on both has hydraulically folding hopper walls and a locking system, which speeds setup. A vibrating double-deck prescreen between the hopper and crusher eliminates fines from the product flow before they ever enter the crusher, reducing wear and cutting fuel costs.

Further enhancements include a dedicated operator-panel access door, so operators don’t have to open the main cabinet and expose it to the elements. An improved remote control allows frequency adjustments of the feeders, and a dust-suppression system with nozzles positioned above and to the side of material reduces clogging.

“Like previous Kleemann crushers, these new machines are sturdy, heavy-built units that provide excellent production in a variety of materials,” said Clemons. “We invite anyone who does mobile crushing or is thinking about it, to contact us and see how the Kleemann products can benefit them.

“On a further note, the Kleemann crushers are powered by Scania engines. Kirby-Smith is now an authorized Scania dealer, so we can perform any work that may be needed on the machines, including warranty items,” added Clemons. “Users can be even more confident in Kirby-Smith’s service capabilities when it comes to the Kleemann products.”

New Kleemann impactor-model crushers have inlet geometry that allows better penetration of the material into the range of the rotor. The wear behavior of the new C-form impact ledges has also been improved so that the edges remain sharper longer, leading to improved material shape. Rotor speeds can be adjusted in four stages to suit different processing applications.
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CONEXPO-CON/AGG attracted nearly 130,000 visitors during its five-day run at the Las Vegas Convention Center, marking the second-largest attendance in the equipment exhibition’s history. The number of attendees increased significantly compared to 2011, which was the last time the triennial event was held. Only CONEXPO 2008 had a larger number of people in attendance.

A record 31,000 international attendees came for the show, which also set a new mark for exhibitor space and exhibitors. Indoor and outdoor displays totaled more than 2.3 million net square feet, with 2,000 exhibitors on hand. CONEXPO-CON/AGG was co-located with the International Fluid Power Exposition (IFPE), which added more than 161,000 square feet of exhibit space and 400 exhibitors.

“CONEXPO-CON/AGG and IFPE 2014 reflected the feeling of momentum that’s building in the industry,” said IFPE Show Director Melissa Magestro. “We are industry-run shows that put industry needs first; these show numbers are a testament to the value that attendees, exhibitors and other stakeholders derive from participating in the event.”

Komatsu had one of the largest display areas, showcasing 24 construction, forestry and forklift products that fit the theme of “Innovative, Intelligent, Integrated.”

Komatsu displayed its family of intelligent Machine Control (iMC) dozers that feature integrated machine control technology. A dedicated theater presentation showed how iMC dozers provide automatic grading from rough-cut to finish grade without using traditional add-on masts and cables. User testimonials highlighted the advantages of iMC dozers, such as automatic blade control and reduced track slip for more efficient and effective dozing.

“We introduced our first iMC dozer about a year ago, and the feedback has been extremely positive,” said Rich Smith, Vice President ICT Business Division and Product Marketing. “CONEXPO is a good place to introduce the newest intelligent Machine Control dozers, as well as our extensive list of other new products.”

Komatsu also presented its new third-generation Hybrid HB215LC-2 excavator. In 2008,
Komatsu introduced the first hybrid excavator and has since sold more than 2,500 worldwide.

“CONEXPO provides a tremendous opportunity for owners, operators and other construction personnel to see the latest in equipment and the technology that’s driving the industry forward,” said Rod Schrader, Komatsu Chairman and CEO. “CONEXPO allows us to show how Komatsu is refining machines to transform the workplace of the future.”

Komatsu introduced several new Tier 4 Final products, including dozers (D155AX-8 and D65EX-18), excavators (PC490LC-11, PC240LC-11, PC88MR-10 and PC55MR) and an HM300 articulated dump truck. It also displayed a Tier 4 Final engine, so attendees could see the innovative way Komatsu meets emissions standards while providing greater machine efficiency. Komatsu’s Tier 4 Final engine technology builds upon the strength of its proven Tier 4 Interim foundation, integrating Selective Catalytic Reduction (SCR) that further reduces NOx emissions.

Additional excavators, wheel loaders, an HD605-7 rigid dump truck, a PC390LL-10 track log loader and an FH45-1 hydrostatic forklift rounded out the displayed equipment. Presentations throughout the show; a large video screen with Komatsu information

Continued . . .
Program and a special “Young Leaders in Construction” event.

**More than 1,000 new products, services**

CONEXPO organizers estimated that more than 1,000 new products and services were on display during the show. Among the new features was a Platinum Lot for asphalt production/paving, aggregate processing and drilling equipment, a Demolition & Recycling Exhibits Pavilion sponsored by the Construction Materials Recycling Association and a Technology & Construction Solutions Pavilion from the Associated General Contractors of America. The Power Transmission Distributors Association also had an exhibit pavilion for sensor manufacturers and product suppliers.

CONEXPO introduced a campaign aimed at raising awareness of the construction industry’s accomplishments, publicizing the positive benefits of construction projects and how they can elevate the nation’s quality of life. Many projects were nominated, and 50 were recognized during an Innovation Awards Program and a special “Young Leaders in Construction” event.

**Record numbers for educational seminars**

CONEXPO-CON/AGG sold a record 41,000 tickets for the educational program seminars, which consisted of 120 sessions that covered 10 targeted tracks, including aggregates, asphalt, concrete, crane and rigging, earthmoving and site development, equipment management and maintenance, business management best practices, work force development, recycling, and preservation and safety. IFPE offered half day “college-level courses,” and a new Fluid Power Seminar series.

“The enthusiasm and traffic on the show floor was just incredible,” said Megan Tanel, CONEXPO-CON/AGG Show Director. “Exhibitors cited the high quality of attendees; they told us these were serious buyers and reported robust sales, to existing as well as new customers, that exceeded their expectations.”

CONEXPO-CON/AGG is slated to return to Las Vegas in 2017. Other upcoming shows include MINExpo, which runs September 26-28, 2016, at the Las Vegas Convention Center.

ReMarketing, Komatsu CARE, parts and other information was available within Komatsu’s display area.
The WA380-7 Tier 4 Interim Wheel Loader is a class leading performer with improvements in production, fuel efficiency, operator comfort and serviceability.

- Komatsu Smart Loader Logic reduces fuel consumption while maintaining production.
- Large capacity torque converter with lock-up provides 10% fuel savings.
- New 7” LCD multi-function monitor panel provides easy access machine diagnostics.
- Komatsu CARE provides complimentary Tier 4 maintenance, including Komatsu Diesel Particulate Filter exchange. Contact your Komatsu distributor for details.
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MEASURING SUCCESS

VP: Building machines that help customers achieve their goals is what it’s all about

QUESTION: Tier 4 Final implementation begins this year. How will you measure these machines’ success?

ANSWER: The same way we have with all new tier-level products. First and foremost, that means the machines meet the environmental standards without sacrificing what customers have come to expect from Komatsu equipment: efficiency, production and reliability. Komatsu strives to design and manufacture machines that maintain or improve productivity with increased fuel efficiency at each new level. Our testing indicates the Tier 4 Final machines will continue that trend.

QUESTION: You went beyond the machine. Why?

ANSWER: New regulations bring trepidation to the customer because of the unknown that comes with them. The machines needed additional components and systems to reduce emissions, especially with Tier 4 Interim, which caused concern. To ease those concerns, we introduced Komatsu CARE, a program that provides complimentary scheduled maintenance for the first three years or 2,000 hours, along with two Komatsu diesel particulate filter changes in the first five years. We wanted customers to have every confidence that we stand behind the machines and our technology, plus make their lives easier. The response remains great, and we recently completed the 10,000th service interval under Komatsu CARE, which will continue with Tier 4 Final.

QUESTION: How did you know that customer concern was there?

ANSWER: Because one of our greatest strengths is listening to customers in the field.

In May of 2013, Rich Smith became the Vice President ICT Business Division and Product Marketing for Komatsu’s Construction Division. His responsibilities include planning and marketing new products and technologies such as intelligent Machine Control (iMC) products and KOMTRAX. He held a similar position in the Mining Division prior to his current role.

Smith is a Peoria, Ill., native and began his Komatsu career on the company’s Peoria Manufacturing Operation’s (PMO) shipping docks 24 years ago. Komatsu manufactures and ships mining products worldwide from PMO, and Smith gained a wide range of experience working both at and for the plant. He eventually moved into the field as a Technical Support Manager, Regional Service Manager and Field Service Manager, before moving into Product Marketing.

“I grew up in Komatsu; I ran forklifts and cranes, assembled machines and was a CNC machinist,” Smith recalled. “From the factory floor, I moved into warranty and contract administration. While most of my career has been on the mining side, I worked with construction as well. Komatsu has allowed me to gain a very well-rounded background. I have been fortunate to have worked with knowledgeable people in a great company. Despite the differences between the two divisions, the desire for customer success remains the top priority of everyone at Komatsu.”

Rich returned to school as an adult, while continuing to work full time, to complete a double major. “I believe it was important for me to finish what I started, as well as set an example that education remains valuable at any age,” said Smith. “The opportunity to learn and work to personally improve at Komatsu is greatly appreciated.”

Continued . . .
How can we manufacture equipment that meets their needs if we don’t communicate with them? That interaction is invaluable and has driven such initiatives as our KOMTRAX Mobile App, which brings critical machine data to a smart phone or other device. Customers are more mobile than ever, and they want that information at their fingertips. Much of the information that’s part of the KOMTRAX Mobile App today came from customers’ suggestions. The system has evolved from the basics, such as error codes and hours, to a comprehensive tool with idle times and operational characteristics.

Customers also helped to develop ideas such as our “i” or intelligent machines. While traditional aftermarket GPS grading systems are good, we saw room for improvement, including taking away the masts and cables that can get damaged and have to be taken down and put back up every day. The GPS systems are also designed only for automated finish grading, and customers wanted that benefit from start to finish without the costs associated with maintaining masts and cables. We delivered an integrated system that makes every pass count and works for even the most inexperienced operator. Then, we took it a step further and made sure the dozers have an optimal blade load with minimal track slip, so the added efficiency was built-in. The results and response have been phenomenal. Again, Komatsu in cooperation with our Distributors, took it beyond the machine by adding Technology Solutions Experts. These highly trained individuals ensure customers get the most out of the intelligent machines, from initial set up to choosing the proper modes for maximum efficiency.

**QUESTION: What’s on the horizon?**

**ANSWER:** Looking ahead, we see the next evolution in hybrid technology. We were the first to manufacture a hybrid excavator, and soon we’ll introduce our third-generation machine. Our customers will continue to guide us – ultimately, we’re in the customer success business. In order for them to be successful, we have to make machines that meet their standards. That’s what it all comes down to.
NPK manufactures an extensive line of the most productive attachments, offering you a wide variety of solutions to most of your construction, demolition, recycling, mining and quarrying needs! The NPK trademark has become a symbol for quality products worldwide, including the greatest selection of hydraulic hammers, pedestal boom systems, primary/secondary crushers, scalers, compactor/drivers, and material processors.
A little more than 20 years ago, the government introduced standards designed to reduce emissions through “tier” levels. Each tier brought a new step toward the ultimate goal of reducing particulate matter (soot) and oxides of nitrogen (NOx) to near zero. Tier 4 Final begins this year, and manufacturers are now producing the first wave of machines to meet this new standard.

“Komatsu met each tier-level challenge head-on; in fact, it met or exceeded the standards,” said Bruce Boebel, Senior Product Manager, Tracked Products. “In most cases, Komatsu also improved power, production and fuel efficiency at every level.”

The biggest challenge came with the jump from Tier 3 to Tier 4 Interim, which required a 45-percent reduction in NOx and a 90-percent reduction in soot. It also required the use of ultra-low-sulfur diesel, emissions filters and Tier 4 specific engine oil. Tier 4 Final requires an additional 80-percent drop in NOx.

“Fluid neutral or better”
Komatsu is using a selective catalytic reduction (SCR) system and AdBlue®/DEF (diesel exhaust fluid), which is a mixture of urea and deionized water, to meet the Tier 4 Final regulations to reduce NOx on machines with 75-horsepower engines and above. The SCR system works by injecting AdBlue®/DEF into the exhaust stream as required. AdBlue®/DEF works with the heat of the exhaust and a catalyst to convert NOx into harmless nitrogen and water vapor that expels out of the exhaust pipe. The SCR system is located next to the Komatsu Diesel Particulate Filter, which Komatsu introduced in its construction machines during Tier 4 Interim. Additional components include NOx and ammonia sensors, a mixing tube and a dosing nozzle.

“SCR technology provides better fuel economy than previous models because it treats the exhaust gases outside the engine, uses less exhaust gas recirculation and employs advanced injection timing,” said Boebel. “Reducing fuel consumption becomes more significant when you consider that nearly every Tier 4 Final machine across almost all manufacturers requires the use of AdBlue®/DEF. In most cases, with Komatsu equipment, customers are going to use about 2 percent of AdBlue®/DEF compared to diesel fuel.

“When you factor in the fuel efficiency of Tier 4 Final machines, the 100 gallons of fuel burned would be at most 98 gallons,” Boebel added. “So, even with two gallons of AdBlue®/DEF, we’re ‘fluid neutral or better,’ which was our goal. In some models, fuel efficiency will be considerably better than neutral. And, since AdBlue®/DEF costs less than diesel fuel, overall fluid cost is reduced in all models.”

AdBlue®/DEF tank added
Komatsu added an AdBlue®/DEF tank, along with a supply module that pumps AdBlue®/
DEF into the SCR system. The tank is vented with a replaceable filter to reduce contamination. It also has sensors to show levels, temperature and fluid quality, as well as an intake suction screen. Komatsu sized the tanks to go a minimum of two fillings of the fuel tank.

“Customers should always use certified AdBlue®/DEF, which meets the ISO 22241 standard and is readily available throughout North America,” said Boebel. “When filled, tanks leave about 10 to 15 percent air space for expansion, in case its fluid freezes. Komatsu built the AdBlue®/DEF system so that the lines purge the fluid back into the tank when a machine is shut down, to help prevent the lines from freezing. Our tank is coolant-line heated, so a completely frozen tank will flow in about 40 minutes, which is about half the time the EPA mandates.

“At the other extreme, high temperatures shorten the life of AdBlue®/DEF,” he added, “So, we created an automatic bypass valve that turns off the heated coolant line.”

Hard workers

A monitor on a Tier 4 Final machine shows the AdBlue®/DEF level and alerts users to inferior-quality fluid. Another new feature on Tier 4 Final equipment allows operators to input an identification number, so equipment managers can track specific users via KOMTRAX®.

“These new components are add-ons to the already-comprehensive list of items customers can track through KOMTRAX® on their computer or mobile devices,” said Boebel. “As with our Tier 4 Interim equipment, Komatsu and our distributors monitor these new machines through KOMTRAX®, so certified technicians can perform complimentary scheduled service under the Komatsu CARE program. Tier 4 Final machines have a few added maintenance items, and the program has expanded coverage.

“With each tier level, Komatsu made improvements, and these machines are no exception,” Boebel added. “The Interim level gave us a very solid foundation from which to work and build. We took those reliable, productive and efficient improvements and enhanced them. For instance, we reduced the exhaust gas recirculation rate and advanced engine timing to provide more complete fuel burn and lower PM. In one example, we slightly tweaked the Komatsu Variable Geometry Turbocharger, providing even faster ramp-up speed and response.

“Like all our previous models, the new Tier 4 Final machines are made to work hard,” he added. “In fact, the harder you work them, the better they perform.”
Technology is rapidly changing how construction companies do business, and it’s also saving them time and money. For example, real-time equipment tracking provides vital information, including a machine’s hours so scheduled maintenance is done on time. Another example is Komatsu’s epartscentral, which is a convenient way to ensure you have the parts on hand when the next service interval rolls around.

Epartscentral allows users with an internet connection to order parts 24 hours a day, seven days a week, 365 days a year. Once logged into a secure Web site, customers can check for parts, see availability and pricing and place an order, which can either be picked up at their nearest Kirby-Smith Machinery, Inc. location, or it can be delivered via several different methods.

“The process is very simple. The customer types in a serial number, and the most up-to-date parts book for that machine will be displayed,” said David Baker, Vice President of Product Support for Kirby-Smith Machinery, Inc. “Customers can see if a part is in stock at our nearest branch location, another branch or directly from Komatsu. Kirby-Smith is fully stocked with common items, and many not-so-common items as well. If we don’t have a part on hand, epartscentral shows that information, tells the user where to find it and how long it will take to get it. In most instances, that’s the next day.”

Komatsu’s epartscentral is great for fleet management, because you can keep a detailed history of all parts ordered via epartscentral for each machine as well as parts lists. All data is stored, and when it comes time to order, simply pull up the saved parts list, drop it in your shopping cart and place the order.

Getting started is easy. If you are a new user, you must register at mykomatsu.com. Kirby-Smith Machinery, Inc. then contacts you to set up an account and makes sure you fully understand the features of epartscentral.

“It takes just a few minutes, and it can be done from the office, the jobsite, home or another location, day or night, with no waiting in line,” said Baker. “In addition to Komatsu parts, customers can order parts for other equipment lines we carry, using valid parts numbers. If they want training on how to get the most out of epartscentral, Kirby-Smith offers that too. It’s a great, no-cost tool that we encourage everyone to take advantage of.”
Former Kirby-Smith sales rep Bob Tilley will be missed

Longtime Kirby-Smith Machinery, Inc. Territory Manager Bob Tilley recently passed away at the age of 86. Tilley retired in 2012 after serving customers throughout Oklahoma for 27 years.

Bob was born in Board Camp, Ark., and grew up in Mountain Park, Okla. After high school, he joined the service and later obtained a degree in Industrial Arts from Oklahoma Central University.

After college, he began his sales career with Cummins Engine in Oklahoma City. He then moved to the local John Deere dealership and later owned his own business. In 1985, he joined the Kirby-Smith Machinery, Inc. sales team. He actively worked with customers until his retirement at the age of 84 as one of the eldest heavy-equipment sales representatives in the industry at the time.

“Early on in my career, one of my customers taught me that people want to do business with people,” Bob said upon his retirement. “They want to know how much you care before they care how much you know.”

Kirby-Smith Machinery, Inc. President Ed Kirby said Bob will be greatly missed. “Bob was more than a salesman; he was a friend to his customers and everyone he met. Bob always had a terrific sense of humor and a positive attitude that everyone who knew him appreciated. We’re sorry to hear of his passing, and our thoughts and prayers are with his family and friends.”

Don’t just take our word for it...

“Paladin attachments have the durability and performance I can always count on.”
—Jim K., Pipeline Contractor

“My Paladin attachment allows me to gain versatility on the jobsite and enhance my machine’s capability.”
—John B., Forestry Management

“When relying on cost effective solutions, Paladin attachments are my solution.”
—Steve H., Equipment Dealer

“I don’t get anything less than maximum performance from my Paladin attachments.”
—Eric J., Landscape Contractor

Connect with Paladin: www.paladinattachments.com

The Power of Combined Excellence®
Kirby-Smith Machinery Inc.
Your local source for Atlas Copco Construction Equipment

Kirby-Smith Machinery Inc. has become a full line dealer of Atlas Copco Portable Compressors, Generators, Air and Gas Powered Tools.

Atlas Copco portable air compressors are reliable and high performance, with a long lifetime, low operating costs, and high resale value. Capacities are from 70 to 2250 cfm and pressure from 100 to 350 psi.

Atlas Copco generators are designed to perform, built to last, increasing up-time and reducing cost of ownership. Power range available from 30 to 250 kW.

Adding these to the line of handheld breakers, both pneumatic and hydraulic, means that we can offer you a productive choice for your most demanding jobs.

Sustainable Productivity
**USED EQUIPMENT FOR SALE**

**HYDRAULIC EXCAVATORS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Make/Model</th>
<th>Description</th>
<th>Unit #</th>
<th>Hrs.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>Gradall XL4100</td>
<td>Wheel Excavator</td>
<td>E00024176</td>
<td>6,500</td>
<td>$30,000</td>
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<tr>
<td>2002</td>
<td>Gradall XL4100</td>
<td>Wheel Excavator</td>
<td>E00020657</td>
<td>3,817</td>
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<td>2012</td>
<td>Komatsu PC27MR-3</td>
<td>Mini Excavator</td>
<td>E00023444</td>
<td>429</td>
<td>$32,500</td>
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<tr>
<td>2003</td>
<td>Komatsu PC158USLC-2</td>
<td>Excavator</td>
<td>E00023682</td>
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<td>$60,000</td>
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<tr>
<td>2006</td>
<td>Komatsu PC300HD-7E0</td>
<td>Excavator</td>
<td>E00013795</td>
<td>8,437</td>
<td>$100,000</td>
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<tr>
<td>2012</td>
<td>Komatsu PC490LC-10</td>
<td>Excavator</td>
<td>E00023610</td>
<td>5,615</td>
<td>$253,000</td>
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</table>

**CRANES**

<table>
<thead>
<tr>
<th>Year</th>
<th>Make/Model</th>
<th>Description</th>
<th>Unit #</th>
<th>Hrs.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Broderson IC80</td>
<td>IND. Crane</td>
<td>E00005256</td>
<td>2,660</td>
<td>$65,900</td>
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<tr>
<td>2005</td>
<td>Elliot 32117</td>
<td>Boom Truck</td>
<td>E00022700</td>
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<td>2007</td>
<td>National 18103</td>
<td>Boom Truck</td>
<td>E00009137</td>
<td>9,513</td>
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<tr>
<td>2007</td>
<td>Terex 3670</td>
<td>Boom Truck</td>
<td>E00023518</td>
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**LOADERS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Make/Model</th>
<th>Description</th>
<th>Unit #</th>
<th>Hrs.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Case 721FXT</td>
<td></td>
<td>E00022678</td>
<td>1,787</td>
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<tr>
<td>2006</td>
<td>John Deere 544J</td>
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<td>E00023582</td>
<td>9,925</td>
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<td>2007</td>
<td>John Deere 544J</td>
<td></td>
<td>E00023581</td>
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<td>2008</td>
<td>John Deere 624J</td>
<td></td>
<td>E00023583</td>
<td>11,997</td>
<td>$72,800</td>
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<tr>
<td>2008</td>
<td>Komatsu WA200FPZ-6</td>
<td></td>
<td>E00023760</td>
<td>4,430</td>
<td>$72,300</td>
</tr>
<tr>
<td>2011</td>
<td>Komatsu WA250-5</td>
<td></td>
<td>E00018251</td>
<td>8,113</td>
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<tr>
<td>2011</td>
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<td>E00020636</td>
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<tr>
<td>2006</td>
<td>Komatsu WA450-5L</td>
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<td>E00018476</td>
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**PAVING & COMPACTION**

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<thead>
<tr>
<th>Year</th>
<th>Make/Model</th>
<th>Description</th>
<th>Unit #</th>
<th>Hrs.</th>
<th>Price</th>
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<tbody>
<tr>
<td>2010</td>
<td>Hamm HD13W</td>
<td>Double Drum Roller</td>
<td>E00022844</td>
<td>2,071</td>
<td>$32,400</td>
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<tr>
<td>2008</td>
<td>Sakai SV505 T</td>
<td>Pad w/ smooth kit Combo Roller</td>
<td>E00023480</td>
<td>1,444</td>
<td>$54,200</td>
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<tr>
<td>2008</td>
<td>Bomag MPH122-2</td>
<td>recycler</td>
<td>E00024135</td>
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<td>2009</td>
<td>LeeBoy 8510</td>
<td>asphalt paver</td>
<td>E00019388</td>
<td>4,012</td>
<td>$62,500</td>
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</tbody>
</table>

**SKID LOADERS**

<table>
<thead>
<tr>
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<th>Hrs.</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>2011</td>
<td>Case SV300</td>
<td></td>
<td>E00015019</td>
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<td>Komatsu SK820-5</td>
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<td>E00009883</td>
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**TRUCKS/TRAILERS**

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<thead>
<tr>
<th>Year</th>
<th>Make/Model</th>
<th>Description</th>
<th>Unit #</th>
<th>Hrs.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>42FT VAN</td>
<td>Utility 42’ Van</td>
<td>E00002899</td>
<td>n/a</td>
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<tr>
<td>1998</td>
<td>1500 GAL H20</td>
<td>Freightliner 1,500-gal truck</td>
<td>E00022846</td>
<td>15,500 mi</td>
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**CRAWLER DOZERS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Make/Model</th>
<th>Description</th>
<th>Unit #</th>
<th>Hrs.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>Dresser TD7G</td>
<td></td>
<td>E00020843</td>
<td>n/a</td>
<td>$11,900</td>
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<tr>
<td>2003</td>
<td>John Deere 850C</td>
<td></td>
<td>E00023643</td>
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<td>2006</td>
<td>John Deere 850J WLT</td>
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<td>E00023644</td>
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<td>E00013934</td>
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<tr>
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<td>Komatsu D65EX-15E0</td>
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<td>E00017724</td>
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<td>2008</td>
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<td>E00020208</td>
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<tr>
<td>2006</td>
<td>Komatsu WA450-5L</td>
<td></td>
<td>E00018476</td>
<td>45,834</td>
<td>$52,500</td>
</tr>
</tbody>
</table>

**CALL US AT (800) 375-3339 OR VISIT US AT WWW.KIRBY-SMITH.COM**

All sales are subject to availability at time of order. Prices do not include taxes or other applicable fees. Kirby-Smith Machinery Inc. doesn’t engage in exports to embargoes countries. Sold As Is Where Is.