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A PUBLICATION FOR AND ABOUT OUR CUSTOMERS IN THE NORTHWEST

UPDATE

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H&B CRUSHING, LLC

Read how this Idaho aggregate company thrives by delivering high quality products



Bob Hall,
Owner/Founder



B.J. Hall,
Owner/Operations
Manager



Jeff Hall,
Owner/Foreman

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Brian Sheridan

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Dear Valued Customer:

Technology continues to advance rapidly in the construction industry. From machine control to virtual-reality simulators, it seems there's something new every day that involves equipment. At Modern Machinery, it's our belief that we carry the most technologically advanced equipment in the market from outstanding manufacturers such as Komatsu. It remains miles ahead of the competition when it comes to *intelligent* Machine Control and monitoring to make you more productive, efficient and profitable.

This issue of your Modern Machinery Update highlights a few of the machines across the wide range of industries that Komatsu serves. There is an article on the new WA200-8 wheel loader that is well-suited for construction, small quarries, agriculture, landscaping and more. Another talks about the mining-class D375A-8 dozer that can also be used for large construction projects.

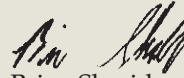
Still more point out the advantages of new rigid-frame trucks for hauling mass amounts of material and showcase Komatsu Forest's highly productive lineup of new forwarders that provide excellent production.

Modern Machinery and Komatsu want you to get the most out of your machines. That's why we offer comprehensive training and can put you in touch with Komatsu's Business Solutions Group. If you have a question on how to better your operations, if a particular machine is the right fit or something else is on your mind, this team can provide the answers. Read more about the Business Solutions Group inside.

Another valuable resource is Komatsu Financial. The Komatsu & You article on new President Rich Fikis gives insight into how Komatsu Financial works with you to provide the right terms and rates to meet your particular needs when purchasing or leasing equipment.

We thank you for your business in 2017, and hope for your continued prosperity in 2018 and beyond. As always, if there's anything we can do for you, please call or stop by one of our branch locations.

Sincerely,
Modern Machinery



Brian Sheridan
President



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H&B CRUSHING, LLC

Idaho aggregate company thrives by delivering high quality products



Bob Hall,
Owner/Founder



B.J. Hall,
Owner/Operations
Manager of Boise
Division



Jeff Hall,
Owner/Operations
Manager of Twin
Falls Division

Bob Hall has made a career out of crushing rocks for people. After high school, he held several jobs handling this type of work around the state of Idaho. Finally, in 1989, he decided to take a shot at running his own operation. Bob bought a portable crusher, called some contacts he'd made in the industry and got started.

"I'd been crushing for a while and was running a crew for a company, so I figured it was time to try it on my own. I guess I wasn't old enough to know any better," joked Bob. "It was great at times and a struggle at others, but I made it."

From day one, H&B Crushing, LLC has been a family operation. Bob's first "employee" was his oldest son, Robert Jr. (B.J.), who was 10 at the time. His youngest son, Jeff, joined eight years later when he turned 10.

"Jeff and B.J. both had a passion for this business from a young age, and now it's in their blood," shared Bob. "They were always playing around on equipment. We'd have customers stop by, and they'd get a kick out of seeing two kids working."

Today, the sons are co-owners along with Bob, and the employee roster now extends beyond the family dinner table. The Kuna-based firm has 47 employees and operates a wash plant as

well as three mobile crushing plants throughout Idaho. H&B Crushing focuses on gravel and aggregate for concrete and asphalt production.

"We mainly work for a handful of customers who we have a good relationship with," noted Bob. "As long as they want us to crush something gray, we're happy to do it. Our specialty is gravel, but our products are used in pipe bedding, landscaping, road base and sub base."

Bob says there is no secret to the growth of H&B Crushing, which produces nearly two million tons of material annually; he simply concentrates on making a quality product.

"Our customers give us a spec, and we stick to it," said Bob. "We are dedicated to quality; that's what made us successful. We don't sacrifice quality for production. We constantly monitor the material. If we fall off spec, we stop and get it right. A company's word and reputation are what set it apart in this industry, and we take pride in both."

Service expansion

While 90 percent of the company's business revolves around crushing, it has evolved slightly to include other related services, mostly site development at the pits and quarries to which they are contracted.

"We do all of our crushing on site," detailed Bob. "In the past, we primarily went in, stripped the material and created a product. Eventually, customers asked if we could do other things at the site, like filling in a spot, building a pad and handling some of the finish work. It makes a lot of sense. By having us do everything, it saves our customers time and money, and it guarantees us more business. It's a win-win."

▶ VIDEO



A Komatsu D61PXi intelligent Machine Control dozer is put to work on a pond-excavating project for H&B Crushing.



► VIDEO

H&B Crushing harvests material from a customer's pit and crushes it into gravel on-site with its mobile crushing plant, which features a KPI-JCI K300 cone crusher and multiple conveyors.

Reclamation projects at crushing sites are commonplace for H&B Crushing. The company dewateres the area before mining the aggregate, which creates a sizable hole. Instead of leaving these areas unfinished, customers are now looking to turn them into man-made ponds.

H&B recently crafted a 49-acre pond that will serve as the center of a residential community. Crews excavated the 20-foot-deep pond, landscaped the shoreline and built 10 housing pads at the site.

"We're fortunate that our customers are happy with us and trust us to do things like this," said Bob. "It's a very efficient way of operating, and it's a fun challenge."

Crushing with Modern

When H&B Crushing needs equipment, it calls Modern Machinery and Territory Manager Jared Johnson. Bob knows he can trust both to get him the right equipment.

"Jared and Modern have supplied us with the tools we need for our business," shared Bob. "In this industry, you need somebody to help you succeed, and we have that with Modern. It's the best partnership we've had."

The company turns to Modern for its mobile crushing units as well. The Halls have three



► VIDEO

Using a Komatsu PC360LC excavator, an H&B Crushing operator strips material from a jobsite.

K300 KPI-JCI mobile cone crushers in addition to stacking conveyors, a double screening plant and sand screw washing plant, all from Modern.

Bob made the switch to KPI-JCI equipment in 2016 after a product demo with Modern.

"We were ready for an upgrade. Jared came to us with the KPI-JCI setup, and we demoed it," recalled Bob. "The proof is in the pudding; the equipment we get from Modern works. More importantly, Modern stands behind it. When you're using a machine to break things,



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Continued . . .

The D61PXi dozer is 'amazing'

... continued

eventually the machine is going to break down as well. Modern has been excellent about taking care of any issues we've had and helping reduce our downtime."

H&B Crushing also relies on Jared and Modern for Komatsu construction equipment. The company's equipment list boasts four WA470 wheel loaders, three PC360LC excavators, 10 HM300 haul trucks as well as D61 and D65 dozers.

"Komatsu makes great machines," said Jeff. "The excavators fill haul trucks quickly, and they are very quiet. The trucks get a lot of use hauling material in and out of messy jobsites without an issue. The loaders and dozers are also very dependable."

The latest addition to the fleet is a Komatsu intelligent Machine Control D61PXi dozer with integrated GPS technology. "The D61i is a valuable tool for us on reclamation projects," explained B.J. "When we dig ponds, we do them in six-foot cuts or safety benches. We upload the models from the customer and get started. Plug-and-play. We're on-grade, and

we don't have any masts or cables to deal with. It's amazing."

Added value

In addition to providing reliable machines, H&B Crushing appreciates the extra benefits that Modern Machinery and Komatsu deliver. Services like KOMTRAX, Komatsu's telematics program; Komatsu CARE, which includes complimentary service on Tier 4 machines for the first 2,000 hours or three years of operation; and Komatsu Financial have all made H&B Crushing's day-to-day operation easier.

"These are examples of Komatsu and Modern going above and beyond," said Bob. "KOMTRAX helped us cut idling time from 37 to 18 percent, in addition to increasing our uptime. We've had numerous instances where a Modern technician called about a warning that came up on a machine through KOMTRAX and sent someone to fix it before it became a larger an issue. Komatsu CARE is similar; it helps us be proactive in our maintenance. These services are so beneficial and keep us on top of our fleet, which is hard to do with one as large as ours.

"We're also big fans of Komatsu Financial," he continued. "It's a hassle-free process. We've used it for most of our purchases – I can buy a WA470 easier than I can a house. We appreciate that Komatsu and Modern go the extra mile."

Continuing to rock

While the project list, equipment fleet, employee numbers and customer base have grown throughout the last 28 years, Bob says what matters most to him is that H&B Crushing is a multi-generational family firm.

"It makes me proud that Jeff and B.J. are involved and invested in the business, and that they are as dedicated as I am," shared Bob. "My sons are good at this and have a strong work ethic. They will have success when I'm gone."

Even after Bob's retirement, don't expect much to change.

"Our motto is 'let our quality aggregate rock your world,'" said Jeff. "B.J. and I love crushing, and we're going to continue to do it with the same dedication to quality that we always have. We're excited about the future." ■

(L-R) H&B Crushing Owners B.J., Jeff and Bob Hall rely on Modern Machinery Territory Manager Jared Johnson for their equipment and service needs.



An H&B Crushing operator uses a Komatsu WA470 wheel loader to stockpile material at a worksite.

► VIDEO



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CONSTRUCTION GOES HIGH TECH

Wearable technology that monitors health, safety, jobsite data gains prominence

Editor's note:

This article is about changes taking place in the industries we serve.

It is for information only and is not intended to promote any particular product or brand.

Wearable technology such as "smart watches" is now widely used in the construction industry. Companies are developing items like smart safety vests and hard hats, that are specifically related to the industry.

Nearly a decade ago, the use of electronic devices to transmit information about equipment operation earned widespread acceptance throughout the construction industry. Now called "telematics," it was first used for tracking equipment. Data collected from machinery in this manner is beneficial in several ways. For example, companies can use telematics to detect a production problem and adjust practices to correct the issue. They might track individual operators and help those who need additional training on how to best utilize a machine or when to shut it down rather than letting it idle.

In its earliest inception, telematics offered information such as location and fuel usage. Throughout the years, manufacturers have built upon that rudimentary data, and their telematics now offer more comprehensive tracking, which includes everything from production numbers to a machine's health.

But, what about the health and safety of workers? There are ways to monitor those critical items as well, with the use of wearable technology.

At approximately the same time as machine telematics began earning favor, the advent of wearable tech occurred. Most people are familiar with it, thanks, in large part, to devices such as "smart watches" and fitness trackers that monitor everything from steps taken to heart rate to the number of calories the wearer consumes. A global forecast from CCS Insight predicts the wearables market will be worth \$25 billion by 2019. According to the article, "Invest in Wearables for Increased Worker Safety," posted on CONEXPO-CON/AGG's website, the global protective work-wear market will grow at a rate of nearly 5 percent in the next four years.

"The construction industry has always seen the potential of wearable technology to improve safety and increase productivity," wrote Sarah Falk in her piece "Top Wearable Technology to Watch for in 2017," which appears at esub.com. "However, the difficulty of implementation posed a challenge that affected adoption by the construction industry. Suppliers of wearable technology have responded to this barrier and are now trying to make construction wearables feasible for any construction company. To do so, suppliers of wearable technology must ensure that the equipment is affordable, easily transferable from worker to worker and user-friendly. As suppliers continue to improve their products to fit the needs of the construction industry, widespread adoption...is expected to grow exponentially."

Falk states in her article that advancements in wearable technology will impact the construction industry in a number of ways, with safety and productivity as the primary factors. She notes that wearables' ability to monitor and report biometrics and dangerous





The smart helmet is a type of wearable technology that could become common on jobsites. One company, DAQRI, designed a wearable with a processor for multimedia and augmented reality. Its heads-up visor display allows instructions and jobsite models to be superimposed in their real-world environment, allowing the wearer to see how a future finished project will look upon completion. Photo courtesy of DAQRI.

environmental conditions provides a more immediate response to safety issues.

“Wearable technology will also increase productivity in construction by allowing each worker to have the most accurate and detailed information at his or her fingertips at all times,” Falk wrote. “According to Rackspace, wearable technology in the construction industry can increase productivity by 8.5 percent. Wearable technology allows all team members to be in constant communication and eliminates any information discrepancies between team members.”

Health-monitoring options

Information from wearable devices, such as fitness trackers, is useful for helping people make better lifestyle choices and eliminate detrimental habits. The construction industry hopes for the same with wearable technology, such as smart hard hats and safety vests, that can monitor and track everything from workers’ whereabouts to practices they use to perform specific tasks to their current health data.

“Heart rate, body temperature, perspiration levels, geophysical location, time in motion and even EEG brain waves are being incorporated into wearable construction technologies designed to improve workers’ safety, boost productivity and comfort as well as generate valuable human behavioral data for optimizing

jobsites large and small,” noted Tyler Riddell in his *esub.com* article “Wearable Devices Bring Human Data to the Connected Jobsite.”

“Born partly from the global success of Fitbit® ... hardware and software engineers see enormous market opportunity for wearables in the construction industry as contractors look to leverage the technology for keeping jobsites working safely and smoothly,” he continued.

Researchers at Virginia Tech University have been working on a safety vest that will alert road construction workers if a car is approaching a construction zone too quickly or too closely, hopefully giving workers time to avoid a potentially deadly situation. Other vests may offer built-in systems to keep workers cool during hot weather or warm them up in frigid temperatures, alert co-workers if someone trips or falls and more.

Hard hats, glasses and goggles

Several other devices that fit under the construction wearable technology umbrella, and perhaps the most easily noticed is a smart hard hat.

One company, DAQRI, designed a wearable that includes a processor for multimedia and augmented reality (AR). The company’s website says its Smart Helmet® with a heads-up visor can display instructions and jobsite models that are superimposed in a real-world environment.

Continued . . .

Wearables help recruit, retain talent

... continued

This allows the wearer to see how a future finished project will look upon completion. The device can also record video and alert the wearer, if it detects a problem. Other manufacturers have created eyewear, such as glasses that offer similar functions and features as the Smart Helmet visor display, to pair with traditional hardhats.

Another area not necessarily considered in the wearable category for construction, but perhaps that should be, is virtual reality (VR). Several companies are developing VR goggles for uses such as operator training and jobsite modeling.

Transparency is vital

Wearable technology is not without its detractors. There are those who see it as another way that “Big Brother” is watching and fear that data collected could be used against them. The argument is something that the construction industry will need to address as technology continues to advance.

In her article, “With Wearable Tech, Trust is Paramount,” author Susannah Levine quotes several experts who say that businesses should have clear intentions for utilizing wearables.

“The degree to which companies can successfully collect data pivots on trust,” Levin writes. Her article goes on to quote

Lockton Companies Vice President, Risk Control Consulting Practice Leader Bill Spiers, “Companies must be transparent about what data they’re collecting and how they will use it.”

Levin’s piece also notes that Spiers calls pre-loss data technologies ‘exciting tools to prevent injury’ but sees potential for litigation if they’re misused.

That fear, along with costs, may make some organizations hesitant to invest in wearable technology right away. In the article “Top 6 Wearables for Safety at the Jobsite,” which appears on CONEXPO’s website, Hagen Business Solutions Owner Carol Hagen suggests that companies should consider the learning curve, what competitive advantage the tech offers in the short term and what is the long-term future, if a business buys into wearables.

“You may find these technologies not only win you more work and increase productivity, but also make it easier to recruit and retain talent with measurable workforce development benefits,” Hagen said, adding, “Measurable results may change more than the work environment; they can make the priorities obvious. The ability of technologies to share data, identify actionable items and create a continuous improvement loop can make the industry safer and leaner.” ■

While not necessarily in the wearable category, virtual-reality goggles can provide the wearer with jobsite models, and can be used for operator training.





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Kirstyn Quandt,
Communications
Manager, NCCER

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If you are unfamiliar with the construction industry, you may assume that a sturdy pair of boots, hard hat and well-equipped tool belt constitute proper safety on the jobsite. And, while all of the above are very important steps on a craft professional's daily checklist, there are many additional precautions to take.

In the past few months, I have become well-versed about proper personal-protective equipment, and when I see someone not properly tied off or without their gloves, safety glasses, etc., I cringe a little on the inside. While safety is critical in all aspects of life, it is an integral part of the construction industry. Just look at any jobsite and it is clear the profession necessitates immense focus. Safety dictates the quality of work produced, and it also directly affects the lives of the men and women on the jobsite, surrounding communities and every individual who sets foot in the structure thereafter.

A hard hat and safety vest are critical pieces of personal protection on the jobsite, but Kirstyn Quandt, Communications Manager for NCCER, says they are only part of the equation. She encourages everyone to take proper precautions, such as planning, tying off, and wearing gloves and safety glasses to prevent personal injury.

Multitasking to blame?

Unfortunately, we live in a fast-paced society. Our simplest wishes are granted and delivered right to our doorstep, and it's easy to lose sight of proper precautions. In an Occupational Health and Safety article, "Building a Culture of Safety at Construction Companies," Jim Stanley wrote, "Multitasking has evolved from a talent to a necessity to maintain the pace of everyday productivity."

Interestingly enough, this article was written in 2010 and, if anything, society has become even more reliant on multitasking. You're driving down the road and someone is scarfing down a half-pound burger as he drives while also adjusting his GPS, or you head to the gym and catch sight of a woman running on the treadmill in jeans and flip-flops as she FaceTimes her best friend. At times it's scary to step back from the craziness of our everyday lives and take an honest look at the unsafe habits we have all become accustomed to.

If you recall the monumental lessons learned in life, there is almost always a safety warning put in place that hopefully changes your actions and thought processes moving forward. "Wear your seat belt." "Don't run with scissors." The list goes on and on.

I encourage you to pause and reflect on the first time you carelessly reached into the oven without a mitt. Whether your mind was too consumed with the task on your list, or you thought your newly acquired superpowers could deflect the heat, we've all done it. What's important is taking that same sense of overwhelming precaution that washes over us from the next few minutes and channeling it into our everyday work because in several industries, including construction, there are many people who depend on it. ■



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NEW WA200-8 WHEEL LOADER

Parallel-lift linkage, change-on-the-fly coupler provide versatility

One machine, multiple applications. That's what Komatsu's versatile new WA200-8 wheel loader provides as the all-around performer handles tasks on construction sites, farms, saw mills and warehouses among others, with ease.

With parallel-lift linkage and high breakout force, the WA200-8 tackles everything from pallet handling to hard digging. Equipped with a 126-horsepower Tier 4 Final engine, it's also more fuel-efficient, reducing consumption by up to 4 percent in V-cycle and load-and-carry applications.

The WA200-8 has a fourth-generation hydrostatic drivetrain with variable traction control, and its S-mode delivers excellent traction control to reduce wheel spin in snowy, icy or slippery conditions.

"An available hydraulic coupler lets you swap attachments quickly, so moving bales, loading pallets or mixing feed can be done with ease," said Frank Nyquist, Komatsu Product Manager. "The WA200-8 also offers a massive upgrade in operator comfort, with a high-back, heated, air-suspension seat that softens machine vibration."

Dialing in the right speed

A mechanism on the right-hand console easily controls creeping in first gear, allowing the operator to dial in travel speeds from 3.2 to 8.9 miles per hour. This feature is ideal for running attachments such as brooms.

Operators can select modes through the 7-inch, LCD color monitor, which also indicates vital data such as diesel exhaust fluid (DEF) level, fuel consumption and performance information collected and sorted by operator ID. Field and

office personnel can track the same information with Komatsu's KOMTRAX telematics system via computer, tablet or a smartphone app.

"Scheduled factory maintenance is complimentary with the Komatsu CARE program for the first three years or 2,000 hours, and each service interval includes a 50-point inspection," said Nyquist, noting that Komatsu provides two complimentary selective catalytic reduction maintenance services and DEF tank flushes in the first five years. "Komatsu CARE lowers ownership costs, raises resale value and improves equipment uptime and availability." ■



Frank Nyquist,
Komatsu Product
Manager

Quick Specs on Komatsu's WA200-8 Wheel Loader

Model	Net Horsepower	Operating Weight	Bucket Capacity
WA200-8	126 hp	25,827-26,489 lbs	2.6-3.1 cu yds

Komatsu's new WA200-8 wheel loader features a parallel-lift linkage and impressive breakout force that make it a versatile jobsite tool. With a change-on-the-fly coupler, operators can quickly go from buckets to forks and back for pallet handling, digging, backfilling and much more.



UPDATED TRUCK MODELS

Komatsu Traction Control System improves production; engine lowers fuel consumption



Rob McMahon,
Komatsu Product
Marketing Manager

Every new Komatsu product provides upgrades and enhancements, and the rigid-frame HD325-8 and HD405-8 trucks continue the tradition with a higher-horsepower engine and a Komatsu Traction Control System (KTCS) that improve productivity. The trucks replace the Dash-7 models with a 514-net-horsepower Tier 4 Final engine that also lowers fuel consumption by as much as 9 percent for the HD325-8 and up to 6 percent for the HD405-8, compared to their predecessors.

The now-standard KTCS automatically applies independent brake assemblies to

achieve optimum traction in varying ground conditions. Because the system operates without the need for differential lock-up, steering performance is maintained.

Additional new standard features include better cab access with sloped stairs and handrails in front that replace the previous ladder configuration. The quiet cab has a 7-inch, LCD color monitor, as well as a dedicated rearview monitor and a premium heated and ventilated operator's seat with air suspension. Enhanced, integrated payload-meter data is available on the main monitor and remotely via the web. Tire size for the HD405-8 increased from 18.00 R33 to 21.00 R33 for extended-wear properties.

Quick Specs on Komatsu's HD325-8 and HD405-8 Trucks

Model	Net Horsepower	Gross Vehicle Weight	Payload Capacity
HD325-8	514 hp	155,999 lbs	40.3 tons
HD405-8	514 hp	170,671 lbs	44.1 tons

Komatsu's new HD325-8 and HD405-8 rigid-frame trucks feature higher horsepower engines and a Komatsu Traction Control System (KTCS) that improve productivity. KTCS automatically applies independent brake assemblies to achieve optimum traction in varying ground conditions.

Modes to optimize performance

As with previous models, the HD325-8 and HD405-8 have Komatsu Advanced Transmission with Optimum Modulation Control Systems (K-ATOMiCS) that adjust shifting performance according to demand, providing a more comfortable ride and reduced material spillage. Automatic Retard Speed Control maintains a selected downhill travel speed – rather than engine RPM – that is appropriate for the grade. Power and Economy modes allow the operator to optimize the performance required for operation.

"The updated truck models retained their industry-leading steering performance and retarding capacity for maximum production," said Rob McMahon, Komatsu Product Marketing Manager. "The addition of Komatsu's latest fuel-saving technologies and the all-new cab lower the cost to maximize production and significantly enhance operator comfort at the same time." ■



HD325-8



HD405-8

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NEW MINING-CLASS DOZER

D375A-8 delivers with 20 percent more horsepower in reverse



Joe Sollitt,
Komatsu Product
Manager

Dozer operators know that faster cycle times improve production. Komatsu's new D375A-8 dozer boosts productivity thanks to a Tier 4 Final engine that delivers 20 percent greater horsepower in reverse, allowing users to make more passes and move a greater amount of material with each shift.

The powerful engine creates 609 net horsepower in the forward direction and 748 net horsepower in reverse. A three-speed transmission with an automatically engaging

lockup torque converter advances fuel efficiency and provides faster ground speed during long pushes.

"Whether it's reclamation, large construction or production mining applications, the D375A-8 is the right machine for the job," said Komatsu Product Manager Joe Sollitt. "Durability improvements to this new model lower the total cost of ownership while the more powerful Tier 4 engine significantly increases performance and production."

The mining-class D375A-8 dozer comes with structural enhancements for better durability of the mainframe and track frame. It also features an enhanced suspended undercarriage, larger viscous cab mounts and a new air-suspension heated and ventilated seat for overall operator comfort.

Single-link blade support, larger trunnion

Additional performance upgrades include a new single-link blade support and larger trunnion bearings that reduce maintenance, increase blade stiffness and minimize blade shake. Improved visibility to the cutting edge and ripper point, blade auto-pitch, ripper auto-return and shoe-slip control reduce operator fatigue and ramp up productivity.

"The changes to the undercarriage, cab suspension and operator interface will make D375A-8 operators more comfortable and effective throughout their shifts," said Sollitt. "We encourage anyone needing a larger dozer to check it out and see the benefits." ■

Quick Specs on Komatsu's D375A-8 Dozer

Model	Net Horsepower	Operating Weight	Blade Capacity
D375A-8	609 hp	165,655 lbs	28.8 cu yds

Komatsu's new D375A-8 dozer yields 20 percent more horsepower while the machine is in reverse for faster cycle times that improve productivity. A three-speed transmission with an automatically engaging lockup torque converter increases fuel efficiency and provides faster ground speed during long pushes.



Discover more



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POWER AND PERFORMANCE

All new forwarder lineup boosts productivity and broadens product range



Steve Yoltz,
Manager,
Marketing Forestry,
Komatsu America



Discover more

Each forestry job is unique, and that's why Komatsu carries an extensive lineup of products to handle a wide variety of logging applications. To up the ante, there are now four new Tier 4 Final forwarders that increase performance, operator comfort, convenience and serviceability, compared to predecessor Tier 4 Interim models.

"We've significantly upgraded our former three-model forwarder lineup to provide increased productivity," said Steve Yoltz, Manager, Marketing Forestry, Komatsu America. "Plus, we now have a model in the smaller size range, which gives us additional market coverage."

New 855, 875, and 895 forwarders replace the 855.1, 865 and 895, and deliver 9 to 15 percent greater horsepower. The 875 and 895 also produce 9 percent more engine torque, and all models offer lower fuel consumption. The 845 model makes its debut in the 12 metric-ton (13.2 US) payload class.

Along with increased horsepower, the engines feature high-torque backup, high-capacity cooling systems and lower noise levels for greater performance and production. A new front blade arm design improves front-end ground clearance.

Greater tractive effort

Komatsu enhanced rough-terrain capability with larger hydrostatic transmission (HST) pumps and/or motors producing 3 to 11 percent greater tractive effort. The intelligent HST control unit continually responds to changes in terrain, load, engine power output and crane usage. This HST combines with the proven Komatsu Comfort Bogie system – which has high portal offset, +/-42-degree articulated steering, more than 1-inch greater ground clearance and a V-shaped, high-strength steel-frame bottom – to create the ideal combination of traction, speed, maneuverability and comfort in all driving conditions.

The rugged, updated Komatsu F-series family of parallel cranes on the forwarders feature high lifting and slewing torque for excellent productivity. The 875 has 14 percent more lifting torque and 32 percent more slewing torque, and the 895 has best-in-class lifting and slewing torque. Komatsu's exclusive ProTec system provides outstanding grapple hose protection for increased reliability.



The new Komatsu 845, 855, 875 and 895 Tier 4 Final forwarders have rated payload capacities of 12, 14, 16 and 20 metric tons, respectively.

A new, more robust FlexBunk system, with multiple frame lengths, optimizes the load space to further maximize productivity. Two rugged headboards are available in the new lineup. The latest version of Komatsu's patented FlexGate headboard, which "flexes" if hit by the crane or a log, is standard on the 845 and 895, and it's optional on the 855. Komatsu's proven fixed headboard with hydraulic telescopic upper gate is standard on the 855 and 875.

Improved operator comfort and convenience

A premium modern cab serves as the center point for exceptional operator comfort and convenience. Large windows deliver outstanding 360-degree and upward/downward line-of-sight visibility, giving the operator a "widescreen" working view. Fourteen powerful LED working lights give excellent illumination for improved productivity in low-light conditions.

An air-suspension, air-vented seat; fully adjustable ergonomic armrests and hand controls; and an automatic, four-season climate-control system, keep the operator comfortable in all working conditions. The spacious cab has multiple covered and open storage areas, including separate heating/cooling boxes for food and beverages in the 855, 875 and 895 (optional on the 845). The unique Komatsu Comfort Ride hydraulic cab suspension system option on the 855, 875 and 895 greatly reduces operator fatigue via its smooth-ride characteristics.

A new, more powerful computer and Komatsu's advanced MaxiXplorer control and information system allow the operator to track production, machine functions and status, as well as adjust machine settings. A deluxe AM/FM/CD/MP3 stereo radio with Aux/USB, Bluetooth and hands-free microphone, comes standard.

Ground-level maintenance and service

All daily maintenance checks and service points can be performed at ground level. Filters are now vertically mounted to minimize spills and simplify replacement. The electrically actuated hood tilts 90 degrees to give full access and serves



The 845 forwarder is Komatsu's new entry into the 12-metric-ton-capacity class. It offers the latest version of Komatsu's patented, rugged FlexGate headboard, which "flexes" if hit by the crane or a log (also standard on the 895 and optional on the 855).

Quick Specs on Komatsu's Four-Model Forwarder Family

Model	Net Horsepower	Operating Weight	Payload Capacity
845	188 hp	36,957 lbs	12 metric tons (13.2 US)
855	228 hp	39,683 lbs	14 metric tons (15.4 US)
875	248 hp	43,872 lbs	16 metric tons (17.6 US)
895	282 hp	51,588 lbs	20 metric tons (22.0 US)

Komatsu's new 875 forwarder is unique with a 16-metric-ton-capacity, and has 15 percent greater horsepower and a new, more powerful 145F crane compared to the prior 865 it replaces.



as a work platform (manually actuated hood on the 845). Separate hydraulic tank and crane service platforms allow easy access to these component areas. Eight service hatches under the front and rear frames offer excellent drivetrain component access.

"The product upgrades take us to the next level," said Yoltz. "The additional 845 model allows us to serve more of the market. We encourage anyone looking for a new forwarder to check these out. They will find that these forwarders provide exceptional, superior production." ■

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INCREASED POWER, COMFORT

New PC290LL-11 log loader delivers high performance in demanding applications

Every forestry business appreciates opportunities to improve its operations, and the new Komatsu PC290LL-11 log loader provides just that. Available in either a 40-foot-reach, live heel log loader or 34-foot-reach, road builder configuration, the PC290LL-11 delivers high performance in demanding logging applications. (Komatsu plans to introduce a processor configuration in the future.)

"We designed the PC290LL-11 by first identifying and then meeting customers' needs," stated Steve Yolitz, Manager, Marketing Forestry for Komatsu America. "For example, in terms of productivity, it has increased drawbar pull. Regarding operator comfort, it has electro-proportional control, or EPC, thumb-actuated buttons for precise attachment function control, as well as all LED lighting, which can extend the work day."

The PC290LL-11 log loader features powerful PC360-class final drives that generate 64,250 pounds of drawbar pull for excellent shovel logging and rough-terrain performance. A rugged PC390-class swing motor and drive deliver high swing torque for superior log loading and road building performance.

Komatsu's standard, robust forestry guarding package now includes an enhanced, right-hand corner-guard system with a fully protected LED light, plus a tree deflector with a "hockey stick" design that can be removed or reverse-mounted for transport. The track-frame steps are also removable or can be reverse-mounted to achieve an 11-foot 5-inch transport width, which meets most local regulations and reduces the need for special transport permits.

High-capacity cooling, cab choices

A new, high-capacity cooling system utilizes wide-core cooling fins for the radiator,

hydraulic oil cooler and a charge air cooler for improved performance and reliability. The heavy-duty, one-quarter-inch-thick cooler air-intake door is waffle-screened and sealed to reduce debris accumulation and cleaning time.

The modern, fully certified cab is more comfortable with lower-profile, pilot proportional control levers for the boom, arm and heel functions. The LCD monitor has a split-display mode, showing both a rear-camera view and key machine gauge data at the same time. The cab is available with a 48-inch hydraulic tilt or 7-inch, fixed-cab riser.

"The initial customer feedback has been very positive," said Yolitz. "The PC290LL-11 is definitely meeting and exceeding their needs as we had planned" ■



Discover more

Quick Specs on Komatsu's PC290LL-11 Log Loader

Model	Net Horsepower	Operating Weight	Reach
PC290LL-11*	196 hp	89,730 lb	40 ft
PC290LL-11**	196 hp	82,230 lb	34 ft

*Live heel, log loader configuration **Road builder configuration



The new PC290LL-11 is available in either a 40-foot-reach, live heel log loader or a 34-foot-reach road builder configuration. It features a new, high-capacity cooling system for improved performance and reliability.

MEETING YOUR SPECIFIC NEEDS

Real help and a variety of options for financing more than equipment are available, says Komatsu executive



**Rich Fikis, President,
Komatsu Financial**

This is one of a series of articles based on interviews with key people at Komatsu discussing the company's commitment to its customers in the construction and mining industries – and their visions for the future.

Rich Fikis joined Komatsu Financial upon graduation from Illinois Wesleyan University in Bloomington where he played both football and baseball. With a degree in accounting, the West Chicago native began his career in collections with Komatsu Financial. Fikis believes that financing is about more than simply lending someone money to buy or lease equipment.

"I started in underwriting in August 2001, right before the economy took a major hit," recalled Fikis. "I learned a lot during that downturn, about helping customers by creatively structuring and restructuring deals, so they could continue to keep their machines and their operations going. That built bonds, relationships and loyalty, which continue today. Ultimately, I learned this is a people business."

Fikis spent four years in collections before moving into credit and then to a regional manager position. Approximately three years ago, he took a role in financial planning and analysis (FP&A) for Komatsu America.

"FP&A gave me a different perspective of the construction and mining markets and was a really good angle for me to see the company from," said Fikis. "It was excellent experience, and combined with my previous positions, prepared me well for this new role as president of Komatsu Financial, which I moved into a few months ago."

Rich and his wife, Tami, have three sons who are active in sports, so he does a little coaching, and they enjoy attending their boys' athletic events.

QUESTION: From a customer's point of view, what makes Komatsu Financial an option to consider when looking for financing?

ANSWER: We have competitive rates and options, and we are also unique in that everything we do is related to equipment. Komatsu Financial understands the construction industry and our customers better than other lenders who finance everything from homes to cars, etc. We know there may be times when a customer's business drops due to weather or other unforeseen circumstances, which may affect cash flow. Our goal is to find solutions that allow customers to keep the machinery until they are in a better financial position.

We also offer financing for Komatsu Certified and other types of used machines. Additionally, we will finance parts and service. If customers need repairs but don't have the funds on-hand to pay for them, they can have the machines fixed, and we will work with them on payment terms.

Other lenders may not be willing to go that extra mile, and because we are, Komatsu Financial has developed many repeat customers throughout the years.

QUESTION: Where does the process to finance a Komatsu machine begin?

ANSWER: Fortunately, we have a very strong distributor network with excellent finance managers at each location. If customers want to lease, buy or rent, they should start a conversation with their local sales representative and finance manager.



More than 80 percent of all new Komatsu equipment sold in North America is financed by Komatsu Financial. Nearly 70 percent of Komatsu Financial's business is from repeat customers.

More than likely, they will refer customers to Komatsu Financial.

QUESTION: What percentage of your business is repeat?

ANSWER: Seventy plus. Customers with whom we have longstanding relationships and who have a solid history of on-time payments and credit are often approved nearly instantaneously when they want to finance another machine.

The balance of our business comes from new customers. We take great pride in attracting and building relationships with them, too. Typically, we can provide answers to their financing inquiries within a day.

QUESTION: What are the most popular financing terms for machinery?

ANSWER: Zero percent interest for 36 months has become somewhat of an industry standard, but every situation is different. In many cases, that may not be the best option. A customer may need or want a longer or shorter financing period. Our aim is to provide rates and terms to best suit each case. If necessary, we can look at customized plans. We're flexible and willing to do whatever we can to ensure that customers have what they need to be productive and profitable. ■



Komatsu Financial provides competitive rates and terms to finance purchases and leases.

In addition to equipment, Komatsu Financial offers parts and service financing.

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TOUGH AND EFFICIENT

Atlas Copco's new PowerRoc T45 surface rig optimizes fuel efficiency

Power to consistently tackle tough jobs day in and day out is essential for companies that rely on drills. Atlas Copco's new PowerRoc T45 tophammer drill provides that and more with fuel-efficient features such as its Power Eco function and effective engine speed options.

The PowerRoc T45 has an extendable boom, making it a versatile rig designed to drill holes ranging from 3 to 5 inches in diameter on construction sites, as well as in cement, limestone and aggregate quarries.

The Strata-Sense® System automatically controls the rock drill power level, feed force and rotation torque in response to changing rock conditions. Even in demanding applications the drill is smooth with fully progressive anti-jam and auto-collaring to ensure reliable and efficient drilling. Rebound energy is controlled by the rock drill cycle to reduce thread wear and improve overall accessory life.

For greater dependability and penetration rate, the PowerRoc T45 is equipped with a 175 l/s air compressor and a durable, standard rock drill. The rig's handling system allows the operator to select the proper rod in the carousel to eliminate unexpected downtime due to rod failure.

Power Eco function adaptability

With the engine's Power Eco function, the rig can be adapted to suit harder or softer rock conditions to save on fuel costs – both in terms of money and environmental impact. By choosing the optimal engine speed to get the job done – 2,000, 2,100 or 2,200 rpm – fuel consumption can be reduced by up to 10 percent.

The rig's straightforward, modern design makes it easy and economical to maintain, for

greater uptime and productivity. Hoses and electric components are managed and clearly marked, and all vital service points are within arm's reach for easy maintenance.

"The configuration of the PowerRoc T45, such as the rock drill and the compressor, makes it a strong, reliable rig," said Atlas Copco Product Manager Masanori Kogushi. "The variable engine helps to conserve energy without compromising the rig's penetration power." ■



Discover more

The PowerRoc T45 has an extendable boom, making it a versatile rig designed to drill holes ranging from 3 to 5 inches in diameter on construction sites, as well as in cement, limestone and aggregate quarries.



POOR PATHWAYS

TRIP report highlights significant deficiencies in America's rural roads, bridges

More than half of America's rural roads and bridges are significantly deficient, according to a report from TRIP, a non-profit transportation research group. Fifteen percent of such roads are rated poor, 21 percent are considered mediocre and 16 percent are deemed in fair condition.

The report, "Rural Connections: Challenges and Opportunities in America's Heartland," notes that 10 percent of rural bridges are structurally deficient, meaning there is extensive deterioration to their major components.

"Rural roads are overlooked far too often. With fatalities rising, repair and maintenance of the nation's roads must be a top priority

for legislators," said Kathleen Bower, AAA Senior Vice President of Public Affairs and International Relations upon the report's release. "By investing in improvements for today and tomorrow, we can deliver safer experiences for motorists and save tens of thousands of lives."

TRIP's data found that crashes and fatalities on rural non-interstate roads are disproportionately high, occurring at a rate more than two-and-one-half times greater than on other roads. In 2015, such roads had a traffic fatality rate of 2.18 deaths for every 100 million vehicle miles traveled, compared to 0.83 deaths on all other types of roads.

Smallest state in dubious spot

Rhode Island ranked first in roads with poor conditions at more than 41 percent. It also tied with Iowa and Pennsylvania for the largest percentage of structurally deficient bridges at 22 percent. At 3.82 fatalities per 100 million vehicle miles traveled, South Carolina was first in that category.

"The safety and quality of life in America's small communities and rural areas, as well as the health of the nation's economy, ride on our rural transportation system," said Will Wilkins, Executive Director of TRIP. "The nation's rural roads and bridges provide crucial links from farm to market; move manufactured and energy products; and provide access to countless tourism, social and recreational destinations. Fixing the federal Highway Trust Fund with a long-term, sustainable source of revenue that supports the transportation investment needed will be crucial to the modernization of our rural transportation system." ■

A substantial number of America's rural roads and bridges are structurally deficient or in poor shape, according to a recent report from non-profit transportation research group TRIP. The organization is calling on lawmakers to find a long-term funding solution.



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NEW PRODUCT LINE

Komatsu General Construction undercarriage provides an additional replacement option



Jim Funk,
Komatsu Senior
Product Manager –
Undercarriage

The Komatsu Genuine Undercarriage line expanded in 2015 with the introduction of the General Construction (GC) product, which offers customers a new undercarriage replacement option. Jim Funk, Komatsu Senior Product Manager – Undercarriage, said the GC undercarriage is an excellent choice.

The initial release of the GC product line was specific to value-priced, track-link assemblies for PC200 and PC300 series excavators. Starting in late 2017 and in early 2018, the GC line will expand to dozers, with link assemblies available for the D51, D61 and D65 models.

“We place a strong emphasis on customer engagement, and as a result, we gain a lot of great feedback,” said Funk. “This dialogue helps us stay in touch with customers’ needs and identify where we have gaps. Our GC offering fits an area that we did not have in the past. For those customers who are evaluating production and are looking at their replacement undercarriage options in a variety of ways, we now have

another competitive-priced offering with a Komatsu Genuine Undercarriage that provides the best assurance coverage in the industry and the full support of their Komatsu distributors.”

High-quality standards

Funk emphasized that the competitively priced GC components are designed and built to the same high-quality standards as all Komatsu Genuine Undercarriage parts. The heat-treating process and hardness levels match other options available for similar machines. All GC components are interchangeable with non-GC parts, giving customers peace-of-mind that they are built to last as well as ensuring a proper fit.

“We are excited about this addition to our Komatsu Genuine Undercarriage line and hope this new product shows that Komatsu and Komatsu distributors have a breadth of products and a range of options to serve as a complete source for all undercarriage needs, no matter the status of the machine or where it may be in its life cycle,” said Funk. ■

Komatsu General Construction replacement undercarriage provides an assembly that is a direct fit for PC200 and PC300 series excavators as well as D51, D61 and D65 dozers. They are precision-machined and go through a heat-treating process to match the hardness depth to the standard links of a new machine.



A SOURCE FOR SOLUTIONS

Komatsu's Business Solutions Group offers customers bottom-line ideas to improve their operations

Making good business decisions is essential to the success of any business. That is particularly true with those relative to matching the right machines to the jobs done by construction equipment.

To help answer the real-world questions involved in finalizing those choices, Komatsu created the Business Solutions Group two years ago. Since then, the group has studied, considered alternatives and provided recommendations to support customers as well as Komatsu distributors and corporate personnel. Now, the group is seeking more customer questions to ponder.

"Our goal is to offer bottom-line tactics that improve production and efficiency," said Director Ken Calvert, emphasizing there is no charge for this service. "We assist all types of companies, large or small. For example, we might work with customers to determine if they have the right size machines for loading trucks in a quarry application or talk about fleet optimization."

Deputy Director Matt Beinlich shared that the group has developed a list of "common cases" it has tackled for customers. Helping provide solutions to these typical concerns gives the Business Solutions Group examples to draw from when helping customers with similar questions.

"We have identified and labeled six common cases, including what we call Goldilocks," said Beinlich. "That category focuses on customers who are looking for just the right size machine; one that's not too big or too small. Another is Sweet Spot, which answers the question of 'When am I putting more money into my machine than it's worth?'"

Putting experience to work

Additional common cases and the questions they address include: Bottlenecks – Are my loaders waiting on trucks or vice versa? Chicken or the egg – Are my operators or the application harder on the machines? Compatibility – What's the most efficient match between my loading and hauling equipment? What ifs – I wonder what would happen if...?

"Each customer is unique, but they may face a challenge or scenario similar to another, and our experience can help in making recommendations," said Calvert. "The Business Solutions Group is committed to helping companies improve their operations and bottom lines. We encourage customers to get in touch their distributors, who, in turn, can contact us to set up times to meet and discuss their challenges." ■

Komatsu's Business Solutions Group offers several services and has identified six common cases. "Our goal is to provide bottom-line tactics that improve production and efficiency," said Director Ken Calvert.



Ken Calvert,
Director, Business
Solutions Group



Matt Beinlich,
Deputy Director,
Business Solutions
Group



Komatsu donates to help hurricane victims

Komatsu America has pledged \$250,000 to the American Red Cross in support of hurricane relief efforts. It will also match dollar-for-dollar, all contributions made by Komatsu America employees and subsidiary-company employees, including Komatsu Financial, Komatsu Mining, Modular Mining Systems, Hensley Industries and Komatsu Forklift.

The corporation noted that among manufacturing and foundry plants, distributors and other support functions, there are thousands of customers and Komatsu-affiliated staff

members in the states of Texas, Louisiana, Florida, Georgia and others affected by the massive storms.

“Speaking on behalf of the Komatsu family of companies, we have been moved by the stories of loss, courage and comradery coming out of the storm-damaged areas in the wake of recent hurricanes,” said Rod Schrader, CEO of Komatsu America Corp. “We are pleased to support the American Red Cross in their efforts to help families and communities begin the journey toward recovery and rebuilding.” ■

Komatsu, Trimble collaborate to improve fleet interoperability

Komatsu and Trimble announced they are collaborating to improve their customers’ ability to exchange 3-D construction site data between the companies’ software to make managing earthworks fleets easier and allow for a more holistic view of site operations.

As part of the collaboration, Trimble and Komatsu are working to develop an

Application Program Interface (API) to enable compatibility between their software platforms. Trimble® Connect™ software, a cloud-based collaboration ecosystem, will support Komatsu’s KomConnect platform for sharing digital construction data that can significantly benefit contractors and project managers. ■

EPA narrows list of projects for first WIFIA loan applications

The Environmental Protection Agency (EPA) chose 12 projects to vie for loan funding through its new Water Infrastructure and Innovation Act (WIFIA) from an initial 43 letters of interest that were submitted to the agency. Wastewater treatment, water recycling and drinking water projects are all in the mix, with the final dozen requesting a total of \$2.3 billion in loans.

These would be the first-ever loans granted under WIFIA, which was established in 2014. Approximately \$1.5 billion is available, according to the EPA. It also noted that applying does not guarantee a project will receive a loan. Requests ranged in size from \$22 million to \$625 million. ■

DOT report: Drivers spending more time stuck in traffic

A joint report from the U.S. Transportation Department’s (DOT) Federal Highway Administration shows the nation’s drivers are spending more time than ever stuck in rush-hour traffic. Based on information from the 52 most populous American cities, it shows that average

congestion cost commuters an additional three minutes in 2016 compared to the previous year.

The DOT says this data further indicates a need to invest in technology to improve traffic movement. It also wants to make road update information timelier. ■

Commercial, multifamily starts down during first half of year

The first half of 2017 saw a marked drop in commercial and multifamily construction starts nationwide compared to the same period last year. Total volume was \$87.5 billion, down 9 percent from the January through June 2016 time frame.

Eight of the top 10 metropolitan markets declined, with the top, New York City, falling nearly 22 percent. Dallas and Boston were down 29 and 27 percent respectively, and Los Angeles fell by 15 percent. Others ranged

from 1 to 5 percent. On the flip side, San Francisco/Oakland grew by 48 percent, while the Atlanta area was up 19. The remaining top-ten markets were Chicago, Washington, D.C., Miami and Seattle/Tacoma.

Metro markets ranked 11-20 fared better, with Denver the only one to decline. Houston, Philadelphia, San Jose, Austin, Baltimore, Charlotte, Orlando, Sacramento and San Antonio all rose, led by Sacramento. ■



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Manufacturer/Model	Description	Serial No.	Year	Hours	Price
CRAWLER DOZERS 					
KOMATSU D375A-6	U BLADE, SS RIPPER	60060	2012	2,553	POR
KOMATSU D155AX-7	SU BLADE, MS RIPPER	90173	2014	2,119	POR
KOMATSU D65PX-17	STRAIGHT BLADE	1001	2014	2,856	POR
KOMATSU D65PX-16	STRAIGHT BLADE, LASER SYSTEM	80416	2010	8,719	\$120,000
KOMATSU D65PX-18	STRAIGHT BLADE	90216	2016	3,350	POR
KOMATSU D61EX-24	PAT BLADE, MS RIPPER, PLUG & PLAY	40105	2016	1,559	POR
KOMATSU D61PX-23	PAT BLADE	31563	2015	2,954	POR
KOMATSU D61EX-15E0	PAT BLADE, MS RIPPER	B47212	2012	1,088	POR
KOMATSU D61PX-15E0	PAT BLADE	B45648	2008	7,067	\$52,500
KOMATSU D39PX-24	PAT BLADE	95004	2016	992	POR
WHEEL LOADERS 					
KOMATSU WA500-7	2 PASS SPEC, 9.8-YD BUCKET, SCALE	70069	2015	2,553	POR
KOMATSU WA500-3L	GP BUCKET	A70393	1999	30,567	POR
KOMATSU WA470-8	5.5-YD BUCKET	100054	2016	1,948	POR
KOMATSU WA380-8	QC	15043	2016	1,521	POR
KOMATSU WA380-8	QC, 3RD VALVE, LSD	15027	2016	1,181	POR
KOMATSU WA380-7	4.3-YD BUCKET	10004	2012	5,619	POR
KOMATSU WA320-7	QC	80562	2015	2,229	POR
KOMATSU WA320-7	QC, 4-YD BUCKET	80775	2016	2,488	POR
HYDRAULIC EXCAVATORS 					
KOMATSU PC650LC-8E0	14' ARM	65106	2012	8,981	\$275,000
KOMATSU PC600LC-8	11' 7" ARM, QC, 36" BUCKET	55098	2008	10,645	POR
KOMATSU PC600LC-7	14' ARM, 72" BUCKET	20170	2006	11,612	POR
KOMATSU PC490LC-10	13' ARM, QC, THUMB	A40160	2012	4,150	POR
KOMATSU PC360LC-10	13' ARM, QC, THUMB	A33567	2014	2,038	POR
KOMATSU PC360LC-10	13' ARM, QC, THUMB, BUCKET	A33239	2014	3,803	\$154,000
KOMATSU PC350HD-8	10' 6" ARM, QC, THIRD MEMBER HYDS	A00022	2011	6,418	POR
KOMATSU PC300LC-7E0	10' ARM, QC, BUCKET	A88811	2007	10,399	POR
KOMATSU PC290LC-10	11' 6" ARM, QC, THUMB	A25582	2014	2,116	POR
KOMATSU PC240LC-10	10" ARM, QC, THUMB	90176	2014	2,878	POR
KOMATSU PC228USLC-10	9' 6" ARM, QC	1847	2015	2,007	POR
KOMATSU PC210LC-10	9' 6" ARM, QC, THUMB	A10370	2014	3,231	POR
KOMATSU PC170LC-10	8' 7" ARM, QC, THUMB	30468	2015	1,516	POR
KOMATSU PC138USLC-10	8' ARM, QC, THUMB, BLADE	42067	2015	1,619	POR
KOMATSU PC138USLC-11	8' ARM, QC, THUMB, BLADE	50228	2016	1,067	POR
KOMATSU PC88MR-8	QC, BUCKET, THUMB, STEEL TRACKS	5941	2012	2,648	POR
MOTOR GRADERS 					
KOMATSU GD655-5	14' BLADE, RIPPER	55420	2013	1,340	POR
KOMATSU GD655-5	14' BLADE, RIPPER	55062	2011	3,511	\$185,000
VOLVO G940B	14' BLADE, RIPPER	U0S577067	2014	570	\$152,500
CAT 14M	16' BLADE, RIPPER, TOPCON BOX	R9J00259	2011	2,747	\$385,000

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FORESTRY EQUIPMENT					
KOMATSU XT460L-3	BUNCHER	A5108	2015	2,254	\$370,000
KOMATSU PC350LL-7E0	LOG LOADER, OREGON CAB	A50008	2012	4902	\$295,000
KOMATSU PC240LL-10	LOG LOADER, TC58	A20602	2014	6,251	\$195,000
VALMET 540T	BUNCHER, (VALMET445EXL)	VFT4C2112120502	2003	12,277	POR
VALMET 890.3	VALMET FORWARDER	310103	2006	18,000	\$55,000
TIMBCO T445C	BUNCHER, QUADCO HOT SAW 40 DEGREE	FT4C1443111698	1998	20,000	POR
TIMBER PRO TL735B	BUNCHER	TL735B0049041910	2010	6,471	\$187,000
TIMBER PRO TL735B	BUNCHER, 22B804	TL735B0215080613	2013	4,671	\$260,000

OFF-ROAD TRUCKS					
KOMATSU HM400-5	ARTICULATED TRUCK, TAILGATE, HEATED BED	10053	2015	2,049	POR
KOMATSU HM400-5	ARTICULATED TRUCK, TAILGATE, HEATED BED	10058	2015	2,910	POR
KOMATSU HM400-3	ARTICULATED TRUCK, TAILGATE	3750	2014	3,834	POR
KOMATSU HM400-3	ARTICULATED TRUCK, TAILGATE	3751	2014	2,833	POR
KOMATSU HM400-3	ARTICULATED TRUCK, TAILGATE	3752	2014	4,143	POR
KOMATSU HM300-5	ARTICULATED TRUCK, TAILGATE	10120	2015	3,077	POR
KOMATSU HM300-5	ARTICULATED TRUCK, TAILGATE	10123	2015	3,084	POR
KOMATSU HM300-5	ARTICULATED TRUCK, TAILGATE	10008	2015	2,485	POR

AGGREGATE EQUIPMENT					
NORDBERG 1560	CONE PLANT	1560331	1991		\$330,000
CEDARAPIDS 1313	CRSH PLT. RC54STD/6162 SCR.N.	PC311995			\$195,000
JCI 1400LS	CONE PLANT, 6X16-2D	C50273			\$195,000
SYMONS 4.25	CONE CRUSHER	41891	1974		\$50,000
PIONEER FT2650	TRACK MOUNTED JAW	415940	2016	1,088	POR
PIONEER FT2650	TRACK MOUNTED JAW	411550	2012	3,468	\$370,000
JCI FT200CC	JCI TRACK MOUNT CONE CRUSHER	T170315	2017	864	POR
JCI FT4250CC	TRACK MOUNT IMPACTOR	414203	2014	2,359	POR
KPI-JCI GT440	TRACK MOUNT IMPACTOR	414558	2015	2,460	\$350,000
KPI-JCI GT125	PIONEER TRACK MOUNT JAW	416324	2017	256	POR
KPI-JCI 8X20-3D	SCREEN PLANT	S14SPT0098	2014		\$275,000
KPI-JCI 6203-32	SCREEN PLANT	S16SPT0190	2016		POR
KPI-JCI 6203-32	6X20 WASH PLANT FAB TEC	6203W37417	2017		POR
JCI 5X16	SPOMAC WASH PLANT	S15WPT0169	2015		POR

COMPACTION					
HAMM 3410	84" HAMM SMOOTH SINGLE, AC	H1792538	2016	116	\$99,000
HAMM H20i	87" HAMM SMOOTH SINGLE, CAB	H2020120	2016	902	POR
HAMM H16i	84" HAMM SMOOTH SINGLE, A/C	H2110166	2015	996	POR
HAMM H11i	84" HAMM SMOOTH SINGLE	H2110411	2015	1,075	POR
HAMM H5i	54" HAMM ROLLER	H2220011	2014	105	\$65,000
HAMM HD+140iVHF	84" HAMM ASPHALT	H2070055	2014	2,012	POR
HAMM HD+120VO	78" HAMM ASPHALT, OZZIE	H1840202	2010	2,687	POR
HAMM HD+110iVO	66" HAMM ASPHALT, OZZIE	H2090035	2015	453	POR
HAMM HD+70iVT	66" HAMM COMBO ASPHALT ROLLER	H1860083	2015	697	POR
HAMM HD13VV	51" HAMM ROLLER	H2010086	2010	4,301	\$12,000
HAMM HD12VV	47" HAMM ASPHALT ROLLER	H2300369	2015	726	POR

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