

www.ModernUpdate.com · 2015 No. 1 · June





MESSAGE FROM THE PRESIDENT



Brian Sheridan

Komatsu adds value while meeting regulations



Dear Valued Customer:

When new emissions regulations were introduced several years ago, Komatsu decided to provide more for its customers than simply machines that lowered emissions. Yes, it met the standards to reduce NO_X and soot, but it went a step further by producing machines that offer greater efficiency, while maintaining or improving production.

Komatsu has already introduced a significant number of new products this year, and we anticipate even more throughout the year. Some are Tier 4 Final and some are *intelligent* Machine Control products. Komatsu built all of them on the solid foundation of the Tier 1 machines it introduced 20 years ago. Several of these new machines are featured in this issue of your Modern Machinery Update magazine.

In 2013, Komatsu introduced its first intelligent Machine Control dozer and subsequently added more models to the lineup. Now, the PC210LCi-10, the world's first *intelligent* Machine Control excavator, joins the family. The excavator semi-automatically limits overexcavation and traces the target surface for greater accuracy and reduced material costs.

Komatsu added additional value once again by providing complimentary scheduled maintenance on its Tier 4 and iMC machines through the Komatsu CARE program. For the first three years or 2,000 hours, our technicians perform the services at your convenience, and at the same time, we perform a 50-point inspection at no charge.

You expect maximum uptime. Komatsu CARE, along with what we believe are the best construction, forestry, specialty and mining machines in the industry, help meet your expectations. We'd love to show you Komatsu's value, as well as how the other outstanding manufacturing lines we carry can meet your unique and specific needs.

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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Published by Construction Publications, Inc. for



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IRON TRIANGLE

Oregon firm part of a program uniting loggers and environmentalists



Russ Young, Owner and President

Loggers and environmentalists are often at opposite ends of the spectrum when it comes to tree harvesting. An innovative, 10-year forestrystewardship contract is now in place in eastern Oregon, and many hope it can serve as a model of how both sides can work together for the common good.

The partnership got its start several years ago, when the last remaining mill in Grant County, Ore., announced it was closing due to a lack of logs. Private timber is scarce in eastern Oregon, and logging in the Malheur National Forest had substantially decreased due to lawsuits from environmental groups. The blow to the local economy from the mill closing, in particular to the town of John Day, would have been severe. That reality brought all affected parties to the table to try to find common ground that would benefit everyone.

The result was a "stewardship contract" to promote ecological restoration; reduce the risk of wildfire; and improve economic vitality in the region. It increases allowable logging in the Malheur Forest by more than 50 million board feet of timber annually to a total of 75 million feet. The 10-year contract, signed in September 2013, was awarded to the longtime logging firm from John Day, Iron Triangle.

"The 10-year stewardship contract is an accelerated forest-restoration project," said Iron Triangle Owner and President Russ Young. "Because of disease and drought, the Malheur Forest was unhealthy and a severe fire hazard. The stewardship contract allows us as loggers to go onto the land to clean it up and sell the harvest – much of it to our local mill. It's basically a thinning program that also takes into account the economic impact of logging, and in doing so, benefits all interested parties.

"Loggers and environmentalists don't see eye-to-eye very often, but that doesn't mean that one side is always right and the other is always wrong," he noted. "The key is to find a middle ground. That's what happened with this program. It's a compromise that will save the forest while benefitting our logging industry and the local economy."

Iron Triangle was founded by Russ's dad, Jack Young, in 1982. The name is from the three nearby forests – Malheur, Wallowa-Whitman and Umatilla. When Jack decided to sell in 1997, Russ bought the road building division. Within a few years, he had the logging and trucking sides as well. Today, Iron Triangle employs about 100 people.

"Prior to the stewardship contract, we were going to be a smaller company, possibly as few as 20 to 30 people," Young noted. "I'm really happy we were able to keep our employees, and even add some, because they are the backbone of Iron Triangle and the reason for our success. I'd put them up against any other company's people – anytime and anyplace."

Iron Triangle is a full-facet logging operation. It uses a wide range of logging methods – from cut-to-length to whole tree to hand-falling.

"We do whatever makes the most sense for the particular customer and the wood supply," said Young. "We also use several contract loggers. One of the goals of the 10-year stewardship contract was a 'community economic benefit.' Other loggers are definitely part of this community, and they've done a lot to help us meet our obligations."

Komatsu Forest equipment

Having a 10-year contract that calls for many times more board feet to be harvested each year has required a significant equipment upgrade for Iron Triangle. The company has turned largely to Komatsu and Komatsu Forest equipment from Modern Machinery in Boise.



An Iron Triangle operator puts the company's Komatsu PC240LL to work in the Malheur Forest in eastern Oregon as part of a 10-year forestry-stewardship contract. The PC240LL is one of two new Komatsu excavators Iron Triangle purchased recently.

"I grew up with the Valmet/Timbco product, which today is Komatsu Forest," said Young. "I firmly believe they are the best machines out there. They are productive and reliable, and our operators are very familiar with Komatsu Forest machines. They can maintain them and even do some minor repairs. Additionally, as it relates to our 10-year stewardship contract, Komatsu Forest equipment is ground-sensitive. We care about the environment too, and this equipment helps us protect it."

Iron Triangle's equipment fleet includes numerous Komatsu XT430 feller bunchers; four forwarders, including one of the world's first Komatsu 895s, a well as a new 22-ton machine that's the largest forwarder Komatsu Forest makes; and about a dozen processors. The company also recently purchased two new Komatsu excavators (a PC290LC-11 and a PC240LC-11) and a Komatsu D37 dozer from Modern Machinery and Sales Rep Jared Johnson.

"We've been very pleased with the support we've gotten from Modern Machinery," said Young. "The staff is great, and Jared goes out of his way to make sure we get what we need. We were also very impressed that, in addition to Modern, Komatsu Forest and Komatsu Financial flew in their people to meet with us in order to understand what this 10-year contract is all about. It's a really big deal for us. The way Komatsu responded demonstrated that it's a big deal to them too."

"Congratulations to Iron Triangle for its involvement in this important program," said Modern Machinery President Brian Sheridan.



Iron Triangle President Russ Young (left) meets with Modern Machinery Sales Rep Jared Johnson. "We're very pleased to be a part of the stewardship program," said Young. "It's a compromise that will help save the forest while benefitting our logging industry and the local economy."

"All of us at Modern are pleased to have the opportunity to support Russ and his team with equipment, parts and service."

Serving as a model

With numerous groups represented, there's a lot of oversight on the 10-year stewardship program. An early study from Oregon and Oregon State universities shows the project has generated \$2.16 million in economic activity and has supported 101 private-sector jobs in the John Day area.

"The intent is for this program to be a model to show what works and what doesn't, so it can be adapted to other regions," said Young. "Each forest region is different and has its own set of issues, but what we learn here should help others find what will work best in their particular situations. At Iron Triangle, we're very pleased to be a part of something that we all hope will produce far-reaching benefits for our industry, our local economies and our forests."



CUSTOM-BUILT CONVEYOR

Mickelo Construction uses a Spomac conveyor system to excavate efficiently in downtown Seattle



Mike Edelbrock, President, Mickelo Construction

Monroe, Wash.,-based Mickelo Construction does excavation and site prep, much of it in downtown Seattle.

"After demolition, we typically remove the asphalt, then start excavating," explained Mickelo President Mike Edelbrock. "We perform mass excavation, dig footings and do slab prep – basically, everything regarding earthwork for a new building once the old one has been removed."

Knowing he had several jobs coming up where trucking out excavated material was going to be problematic, either due to hole depth or overhead power lines, Edelbrock studied the feasibility of using a conveyor system that would enable him to load trucks at the street level. He looked at several conveyor manufacturers before selecting Spomac (formerly Spokane Machinery), a Modern Machinery Company that specializes in crushing and screening products.

At this project in the South Lake Union area of Seattle near the Space Needle, Mickelo Construction uses a Spomac conveyor system to remove material as part of its excavation for a new apartment building.



"We have a very positive history with Modern Machinery, and that is mainly why we chose Spomac," said Edelbrock. "We own Komatsu excavators almost exclusively. Our Sales Rep Marc Bandy is great to work with. Modern provides outstanding service and stands behind its products. I was confident Spomac would do the same, and that's definitely been the case."

Spomac custom-built a conveyor for Mickelo that would accomplish exactly what Edelbrock wanted to do. The system consists of two 36-inch-wide conveyors – one that's 100 feet long and the other 80 feet long – and a feeder with a 42-inch-wide belt to prevent clogging. At the end of the conveyor setup is a shipping container, open at both ends, to allow pedestrians to continue to use the sidewalk while conveyed material passes overhead and is deposited into trucks and trailers.

Special features of the conveyor Spomac designed for Mickelo include:

- Stronger bracing to better hold the long spans;
- Increased horsepower on conveyor motors;
- A fluid-drive coupling that acts like a torque converter;
- Lightweight material that makes it easier to pack up and load;
- A special fold-up design for easier transport and quicker setup.

"We wanted the increased power so we could start and stop the conveyor while fully loaded, as well as load a truck and trailer in two-and-a-half minutes," said Edelbrock. "The fluid-drive coupling also helps lessen spillage by starting the belt a little slower before reaching max speed. Being relatively lightweight means we can load the unit using our own equipment (Komatsu PC490 excavators). The fold-up design means we can move it easily on city streets and save as much as three to four hours in setup time.



Discover more



(Clockwise from bottom left) Mickelo Construction uses a Komatsu PC308 excavator to load material into a feeder that delivers it to a conveyor setup. The Spomac conveyor consists of two 36-inch belt units, one 100 feet long and the other 80 feet long. The conveyor carries material from the hole and drops it into trucks at street level. A shipping container without doors allows pedestrians to use the sidewalk throughout the excavation process.

"The unit has worked great for us, and the support from Modern has been outstanding," he added. "The system has worked even better than we expected in one regard: They told me I probably wouldn't be able to load mud and wet material, but we've proven it will, indeed, handle them."

Fast and efficient

Mickelo's current project is at 222 Fairview in the South Lake Union area of Seattle, just east of the Space Needle. The new building, which will sit on half a city block, will be apartments with underground parking and mixed-use on the lower floors. The General Contractor is Chinn Construction, for which Mickelo does a lot of work.

"All of our jobs are for repeat customers," said Edelbrock. "For example, I think we've done everything for Kevin Chinn except two buildings, and those were because we had other commitments. We're in demand because we do good work and complete jobs quickly. Our workforce deserves most of the credit. Also, I try to always be on-site to make sure projects are



Mickelo President Mike
Edelbrock (left) worked with
Modern Machinery Sales Rep
Marc Bandy, as well as Spomac
personnel, to setup the conveyor.
"We have a very positive history
with Modern and that factored
heavily into our decision to
go with Spomac (a Modern
Machinery company)," said
Edelbrock. "And we've been
pleased. The unit has worked
great and support from Modern
has been outstanding."

proceeding at a good pace. To maximize efficiency, everything needs to be done in the proper order and in a good rhythm. To ensure that happens, we plan ahead and try to communicate well with all parties. We don't want anybody interrupting us, and we try not to interrupt anybody else.

"The Seattle economy seems very strong right now. Construction is booming, and we're fairly well-set for the entire year. As long as we maintain our reputation as a company that does quality work quickly, I'm optimistic about what lies ahead for Mickelo Construction."



BEYOND THE BASICS

Comprehensive training builds a better workforce that's more invested in your business

It's rare that employees come fully prepared to do the jobs for which they were hired. Skilled construction workers know how to move dirt, build buildings and put pipe in the ground, but do they know your expectations and how you approach projects? With comprehensive training, they will.

"I've talked with many companies that wonder whether training is worth it, considering that in

Comprehensive training should include several items, such as safety, company policies, compliance and more. Training should be ongoing to keep skills updated.



today's world, most employees only stay with a company for a relatively short amount of time," said Karla Dobbeck with Human Resources Techniques, Inc. "Training is essential. It keeps employees up-to-date, and it tells them that you value their service to the company. In the end, it may motivate them to stay long term. Look at it this way: The only thing worse than training an employee who leaves is not training one who stays."

Dobbeck suggests a comprehensive approach that goes well beyond just training employees to do their jobs. The list should include safety, company policies, compliance and more. Training should be ongoing to keep skills updated.

"New employees should know about the company – where it came from, how it got to where it is today and how they fit into it," said Dobbeck. "They should know its history; changes and expansions; the industries it serves; who its customers are, and if they are mainly new or repeat; how it interacts with the community; and more. This gives the employees perspective, and it may tell them why they were hired and how their skills are valuable to the team.

"The company information should include its corporate culture and policies," Dobbeck added. "Culture encompasses its community involvement and working relationships. Policies cover everything from attendance to housekeeping, telephone use and those unwritten 'hot buttons' that management views as pet peeves but may not be in a handbook. They also need to know basics, such as breaks and lunch periods, as well as more important items, such as how to report grievances, maintenance and quality issues and the overall



Employees should receive job-specific training that helps them understand what their jobs entail and how they relate to others. Include training on where they will be working and where to find necessary tools.

chain of command. This falls under what I call 'performance management.'"

Job-specific, safety measures

Even experienced hires need job-specific training. While their positions may be similar to the ones from where they came, there may be different perspectives on how to approach tasks and projects. Employees must know exactly what their jobs entail and how they relate to others. Added questions to address include: where they will be working and where to find necessary tools; quality information, such as policies and systems; recordkeeping expectations; what to do when customers call or stop by a jobsite; technical terms and phrases that involve how to read and complete paperwork; and terms of equipment usage.

Construction creates special challenges when it comes to safety, and it's essential that employees know all your company's policies. Include information on personal protective equipment, lock out/tag out procedures, hazard communication, emergency evaluation, accident and hazard reporting, and what to do when OSHA is on site. If you use equipment such as cranes, hoist and crane-safety practices must also be explained.

"Processes and procedures related to equipment have to be part of any training program," said Dobbeck. "Part of that is planning for transport, loading and unloading practices, mobilization and setting up when you get to the jobsite. Consistency is a key component, because it results in fewer errors."

Understanding legal obligations

Employees must also understand their legal obligations. For instance, if they drive trucks, they must be licensed and drug-free. Their status affects more than just them. An accident could affect your company's insurance rates and safety rating.

Additionally, employees are responsible for their behavior on the jobsite and in the office. Harassment and discrimination should never be tolerated, and clear definitions of what those constitute are essential. Employees need to understand their roles in reporting, assisting with investigations and what likely management action will result from incidents.

Dobbeck says that payroll procedures fall under legal obligations, because it's up to everyone to keep count of their time and report errors. Understanding when pay dates occur is essential as well.

Recordkeeping and assessing

Part of an excellent training program is good recordkeeping that makes sure everyone gets the same information, according to Dobbeck.

"Companies should use checklists," she points out. "They ensure consistency and

Information in this article
was obtained from a
presentation by Karla
Dobbeck at the annual
Associated Equipment
Distributors Summit.
Dobbeck founded Human
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in 1997 and is a personal
human resources advisor.
For more information
about Dobbeck or Human
Resources Techniques, visit
the company's website at
www.askhrt.com.

Continued . . .

Training develops a solid workforce, reduces turnover

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provide evidence of employee training. They also provide accountability and identify gaps in training that need to be filled. Additional effective measures include training guides. Weekly evaluations are good ways to maintain focus, and they're proven to help avoid unemployment."

Finally, businesses must constantly assess the effectiveness of their training practices and hold themselves accountable.

"Just as they measure employees, businesses should test themselves to see where they may be lacking when it comes to training, so they can improve," said Dobbeck. "Companies should look beyond just using supervisors to train new hires. They should consider an assigned trainer or auditor. Those individuals should set clear goals for everyone, using 'carrots' to incentivize positive behaviors and help employees understand how they can 'earn' raises.

"Training is one of the most valuable and effective tools for developing a solid workforce," Dobbeck added. "It must be an essential component of good business practices. A comprehensive program will not only help to ensure employees have the right information and skills to do their jobs, but it's also shown to be effective in reducing costly employee turnover."

Avoid costly mistakes by calling before you dig



Call before you dig to identify underground utilities and help you avoid them and potential harm to your employees and others.

Call before you dig. It's a simple, easy and free way to avoid mistakes. There's even an easy-to-remember number: 811. It will help you avoid the mistake that thousands make each year when they hit unmarked utility lines.

The intent of the 811 call line is to provide a single number where those performing excavation, or even demolition, can call and have utility companies locate buried lines. It's a way to avoid hitting one, causing potential injury and/or disruption of services.

The law requires that anyone who wants to begin excavation, including private homeowners, must call at least 48 hours in advance to have the underground utilities marked. Failure to do so can result in everything from a fine to serious injury or death from hitting an unmarked electrical or gas line.

When calling 811, a representative will ask for some basic information, such as what you are planning to do. The rep will want to know the location, length of time you plan to dig and other pertinent information. Once you've made the call, the rep will notify the local utilities. All you have to do is wait at least 48 hours before digging.

Utility companies mark the lines, giving you a reference point so you know how close your excavation will be. Should you accidentally hit a line, stop digging and immediately call authorities.

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KOMATSU DEMO DAYS

The world's first *intelligent* Machine Control excavator was the star – but not the only attraction



Discover more



Tony Ewing (left) and Mike Sarin (right), both from Big River Construction out of Astoria, Ore., attended Demo Days with Modern Machinery's Rob Jacobs (center).

> Komatsu America Director of Marketing Communications Bob Post introduces the machines and the ground rules.





Komatsu Demo Days, held late in 2014 at the Komatsu Training & Demonstration Center in Cartersville, Ga., was the first opportunity for contractors to try the new PC210LCi-10 – the world's first "intelligent" hydraulic excavator (see related article).

"Contractors everywhere are embracing grade-control technology as a way to move dirt more efficiently," said Komatsu America Director of Marketing Communications Bob Post. "For other manufacturers, that means an "add-on" aftermarket mast and cable system. Komatsu is truly at the forefront by integrating such technology at the factory – first with our *intelligent* Machine Control (iMC) dozers, and now with our intelligent excavator."

At Demo Days, Komatsu had four PC210LCi-10s for attendees to "test drive," along with the complete line of iMC dozers. Beyond the iMC units, Komatsu displayed other Tier 4 machines, including a PC490LC-11 excavator, a D155AX-8 dozer, a WA600-6 wheel loader and the new HM300-5 articulated truck. Komatsu also provided tours of its Chattanooga, Tenn., manufacturing plant, as well as held informational seminars on Efficient Machine Operation, KOMTRAX and the benefits of No Idling.

"The object of Demo Days is to let contractors get their hands on Komatsu machines and kick the tires, so-to-speak," said Post. "Beyond operating the equipment itself, we want to show customers how to get the most out of the technology that we build into each machine. It's that technology that truly sets Komatsu apart. When it's used properly, it will help customers significantly lower their machine owning and operating costs."





EXCAVATION EXCLUSIVE

Komatsu's PC210LCi-10, world's first *intelligent* Machine Control excavator, minimizes overexcavation

Excavation companies want to move dirt as quickly and efficiently as possible, but conventional methods sometimes limit their ability to do that. Constantly checking grade is time consuming, and overexcavating is costly. Komatsu's new PC210LCi-10, the world's first *intelligent* Machine Control excavator, is a huge step forward in solving those issues with exclusive control function that goes beyond simple guidance to semi-automatically limit overexcavation and trace a target surface.

"From rough-digging to finish-grading, the PC210LCi-10 offers improved efficiency and accuracy compared to traditional methods," said Peter Robson, Senior Director of Intelligent Machine Control. "Once the target elevation is reached, no matter how hard an operator tries to move the joystick control to lower the boom, the excavator won't allow it. Minimizing overexcavation also reduces wasted time and the costs associated with placing and compacting new, expensive material to replace what didn't need to be removed in the first place."

Advanced functions contribute to the PC210LCi-10's ability to effectively reach target elevation without overexcavating, including Auto Grade Assist. As the operator moves the arm, the boom adjusts the bucket height automatically, tracing the target surface and minimizing digging too deep. This allows the operator to rough-dig without worrying about the design elevation, as well as fine-dig by operating the arm lever only. By holding down the lever to move the boom down, the working range is expanded.

Another new function is Auto Stop Control. During boom or bucket operation, the work equipment automatically stops when the bucket edge reaches the design surface.

The excavator also comes equipped with Minimum Distance Control. The PC210LCi-10 controls the bucket by automatically selecting the point on the bucket closest to the target surface. If the machine is not facing a sloped surface at a right angle, it will still follow the target surface and minimize digging below it.

New large touchscreen display

The PC210LCi-10 features a factory-installed, fully integrated *intelligent* Machine Control system that includes Global Navigation Satellite System (GNSS) antennas; stroke-sensing hydraulic cylinders for the boom, arm and bucket; and an IMU (inertial measurement unit). The system works in harmony to provide real-time bucket-edge positioning in relation to the machine

Continued . . .

Komatsu's new PC210LCi-10 intelligent Machine Control excavator semi-automatically limits overexcavation and traces a target surface.



Peter Robson, Komatsu Senior Director, Intelligent Machine Control



Jason Anetsberger, Komatsu Product Manager, Intelligent Machine Control

Ouick Specs on the Komatsu PC210LCi-10 Excavator*					
Model Operating Weight Net Horsepower Bucket Capa					
MINIOUCI	operating vergit	rtet Horsepower	Ducket Cupacity		
210LCi-10	48 950-52 036 lbs	158 hp	0.66-1.57 cu. vd.		

*All specifications are the same as a conventional PC210LC-10.



The PC210LCi-10 brings automatic features to excavators

.. continued

and the job surface, limiting the ability to dig beyond the target elevation and making accurate finish grading possible.

The bucket tip/edge and the design surface are always displayed on the new, full-color, multifunction 12.1-inch touchscreen monitor, eliminating the wait time associated with conventional systems. Information such as real-time and as-built status, a magnified fine-grading view or a 3D view, may be displayed simultaneously.

The PC210LCi-10 makes grading easy and accurate with a facing-angle compass, a light bar and audio guidance that alerts operators as they get closer to final grade. The orientation and color of the facing-angle compass's arrow shows the operator the facing angle of the bucket edge relative to the target surface, allowing for the bucket to be accurately positioned square to the target surface, which is especially useful when finishing slopes.

Colors on the light bar also show the bucket-edge position relative to the target surface. It's located on the left side of the monitor for easy viewing during operation and increased efficiency. Audio alerts help the operator recognize the target through unique tones that can be programmed for various bucket-edge distances from the target surface.

"Operators always know where they are in relation to where they eventually want to be," said Jason Anetsberger, Product Manager, Intelligent Machine Control. "Operators can set audio guidance alerts so that different tones are heard the closer the bucket is to final elevation. For instance, one tone may indicate 2 feet away, while a different tone is heard at 1 foot. Customers who tested the machine really liked the audio alerts because they allow the operator to focus on digging without stopping to check relation to final grade."

Two-way communication

The PC210LCi-10 comes standard with a cellular modem that supports troubleshooting from afar, via the Internet. Additionally, this hardware can be used by Topcon's jobsite management solution, Sitelink3D Enterprise,

> which sends as-built data to the office and design data to the machine.

"The PC210LCi-10 represents a huge leap forward by bringing automation features to excavators,"

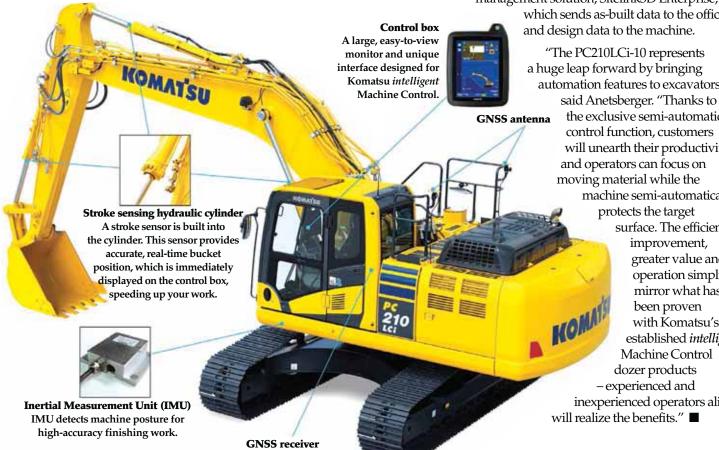
> the exclusive semi-automatic control function, customers will unearth their productivity and operators can focus on moving material while the

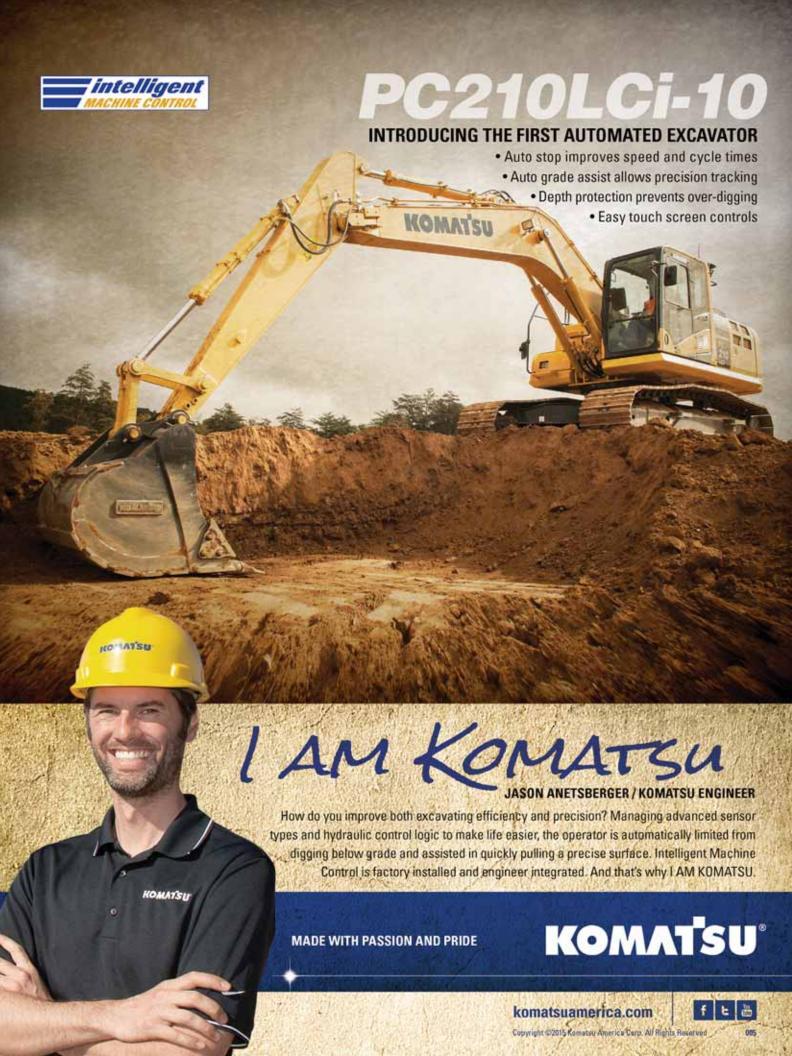
machine semi-automatically protects the target

surface. The efficiency improvement, greater value and operation simplicity mirror what has been proven with Komatsu's established intelligent Machine Control dozer products

inexperienced operators alike will realize the benefits." ■

The PC210LCi-10 intelligent Machine Control excavator features a factory-installed, fully integrated intelligent Machine Control system that includes GNSS antennas, stroke-sensing hydraulic cylinders for the boom, arm and bucket and an IMU (inertial measurement unit).







IMPROVED PERFORMANCE

Enhancements give PC360LC-11, PC390LC-11 increased performance and lower per-ton costs



Kurt Moncini, Komatsu Product Manager, Excavators

Building on the success of the previous models, Komatsu has designed its new PC360LC-11 and PC390LC-11 excavators to increase production. These Tier 4 Final versions have 257-horsepower, environmentally friendly engines that provide high levels of performance, while reducing operating costs and improving fuel efficiency.

Komatsu enhanced the new excavators' Power mode with improved hydraulic-control logic, resulting in better performance, according to Kurt Moncini, Komatsu Product Manager, Excavators. Power is one of six working modes that allow

The new PC390LC-11 continues to feature a one-class-size-larger undercarriage with heavy-duty components, which gives it high lift capacity and lateral stability. The larger undercarriage has a 6-percent-wider track gauge and offers up to 18-percent-greater over-the-side lift capacity than the PC360LC-11.



operators to match the machine performance to the application.

"The enhanced Power mode combines flow from both pumps and has an improved engine power match to the hydraulics when digging," said Moncini. "That creates better cycle times and digging performance and lowers per-ton costs. During testing, we saw up to 4-percent improved performance, although, it would not surprise us to see even greater performance with experienced operators."

Additional new features include an Operator Identification System, which reports key information for different operators, applications or job locations, and the Auto Idle Shutdown function that helps reduce idle time, as well as operating costs. Both features can be tracked through the latest KOMTRAX technology, which provides essential data, such as fuel and diesel-exhaust fluid levels, operating hours, location, cautions and maintenance alerts.

"Snappy response"

The excavators maintain the horsepower of their predecessors, with a less-than-1-percent increase in operating weight. The PC390LC-11 continues to feature a one-class-size-larger undercarriage with heavy-duty components, which gives it high lift capacity and lateral stability. The larger undercarriage has a 6-percent-wider track gauge and offers up to 18-percent-greater over-the-side lift capacity than the PC360LC-11.

"The PC360LC-11 is a good fit, right in between a utility-size machine and bigger excavators," said Moncini. "It's great for site development, trenching, pipeline and general construction applications. It's easy to transport and provides high performance.



Power mode with improved hydraulic-control logic, resulting in better performance.

Model	Net Horsepower	Operating Weight	Bucket Capacity
PC360LC-11	257 hp	78,645-80,547 lbs.	.82-2.56 cu. yds.
PC390LC-11	257 hp	87,388-89,248 lbs.	.89-2.91 cu. yds.

"When a company needs extra lift capacity, that's where the PC390LC-11 comes in," he added. "Even though we didn't change the horsepower, we're seeing a better response from this model. During testing, users described it as 'snappy' and were extremely pleased with the increased production they were getting."

Large, comfortable cab

Both models feature a large, comfortable cab specifically designed for hydraulic excavators. It is both ROPS and OPG Level 1 certified and gains strength from a reinforced box-structure framework. The cab is mounted on viscous isolation dampers, which provide low vibration levels. A standard, heated, air-suspension high-back seat with fully adjustable armrests provides improved comfort. In addition to a standard AM/FM stereo, an auxiliary input for connecting external devices is provided to play music through the cab's speakers. Additionally, both models feature two 12-volt power ports, and optional joysticks are available with proportional controls for attachment operation.

For global support, the high-resolution, 7-inch LCD color monitor has enhanced

capabilities and displays information in 33 languages. The monitor panel provides information on DEF level, eco guidance, operational records, fuel-consumption history and utilization. A new display interface combines vehicle information with a wide landscape view from the standard rearview camera, so the operator can easily view the working area directly behind the machine.

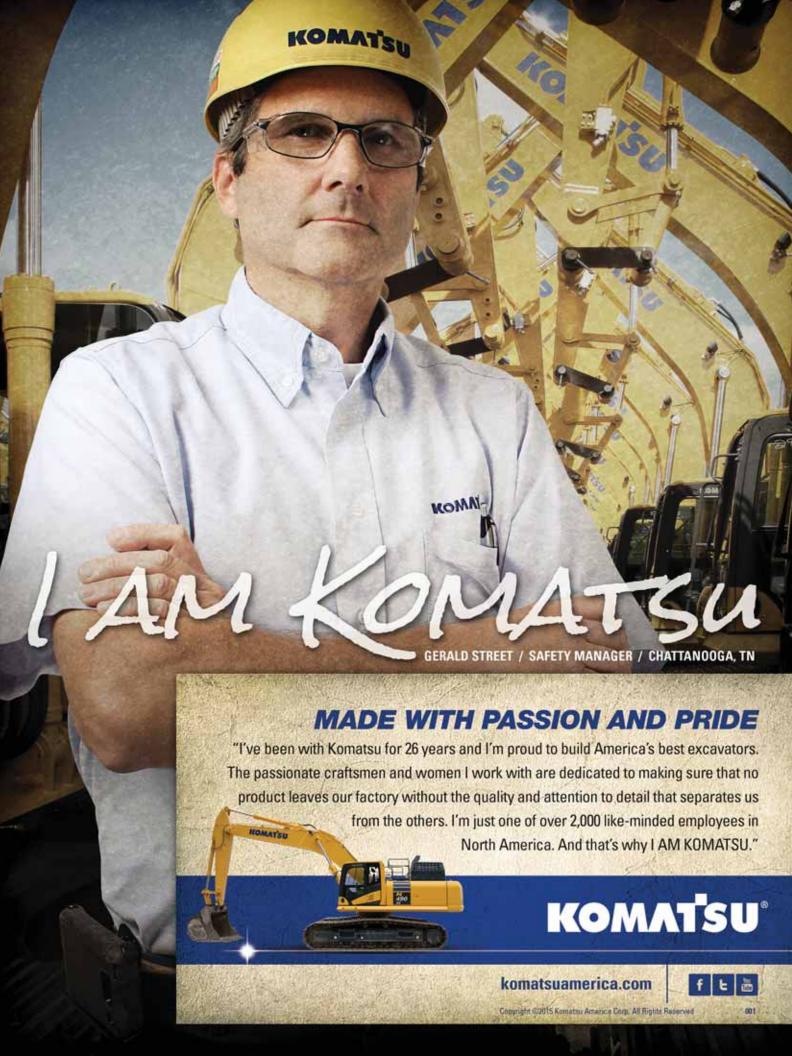
The new excavators are equipped with the exclusive Komatsu EMMS (Equipment Management Monitoring System). The system has diagnostic features to give operators and technicians greater monitoring and troubleshooting capabilities for preventive maintenance, which minimizes diagnostic and repair time.

"Komatsu covers routine scheduled service complimentary through our Komatsu CARE program for the first three years or 2,000 hours," said Moncini. "The PC360LC and PC390LC have been among our most popular models for many years due to their productivity and efficiency, and these new models build on the foundation of their predecessors." ■



PC360LC-1







NEW FORESTRY MODELS

Komatsu's XT-3 Series improves operator comfort, ease of operation, productivity and reliability

Productivity and reliability are essential in logging. Komatsu's new XT-3 Series track feller bunchers and harvesters improve both, as well as operator comfort and ease of operation. Four models are available, and each provides superior maneuverability, multi-function capability and high production, even in the most demanding forest environments.

New cab features "First in the Forest" technology

Komatsu focused on the operators with a completely redesigned, more spacious cab that has a sloped roofline, which increases headroom above and in front of the seat and reduces debris buildup. The floor-to-ceiling front window is 10-percent larger than in previous models, and larger side windows and skylight window further increase visibility. It's quieter; pressurized with fresh, filtered air for the new automatic heating, cooling and defrosting system; and has an ergonomic seat with easy-to-reach instrumentation.

The XT-3 Series cab features the new "First in the Forest" IQAN-MD4 programmable digital control system, one of the most advanced systems on the market, and highly intuitive Komatsu programming makes it very easy to use. All former analog gauges and warning lights are now prominently displayed on the highly visible and durable 7-inch LED color touchscreen monitor. It accommodates individual preference settings for multiple operators, records harvest data and provides advanced diagnostic reports.

"From the start of the Komatsu XT-3 family project, the primary objective was to improve operator productivity through 'attention to the details' from the operator's perspective," stated Steve Yolitz, Manager, Marketing Forestry, for Komatsu America Corp. "The most visible

result of this is the totally new, state-of-the-art forestry cab. Everything from the cab layout to cab-feature content was designed to improve operator comfort, ease of operation and productivity."

Upgrades to the hydraulics and undercarriage deliver greater productivity, reliability and durability. The XT460L-3 has a 37-percent-greater lift capacity at full reach compared to the XT450L-2 model. The undercarriages feature a new chain-guide design, which uses stronger materials for increased service life.

The XT-3 Series can be equipped to meet a wide range of customer applications. Komatsu offers as many as nine hydraulic system arrangements, two heavy-duty booms and four heavy-duty arm options that accept a broad range of cutting attachments, including a disc saw, bar saw and processing head. Advanced, parallel-boom geometry allows fast boom movement and smooth control, which increases operator productivity and reduces fatigue.

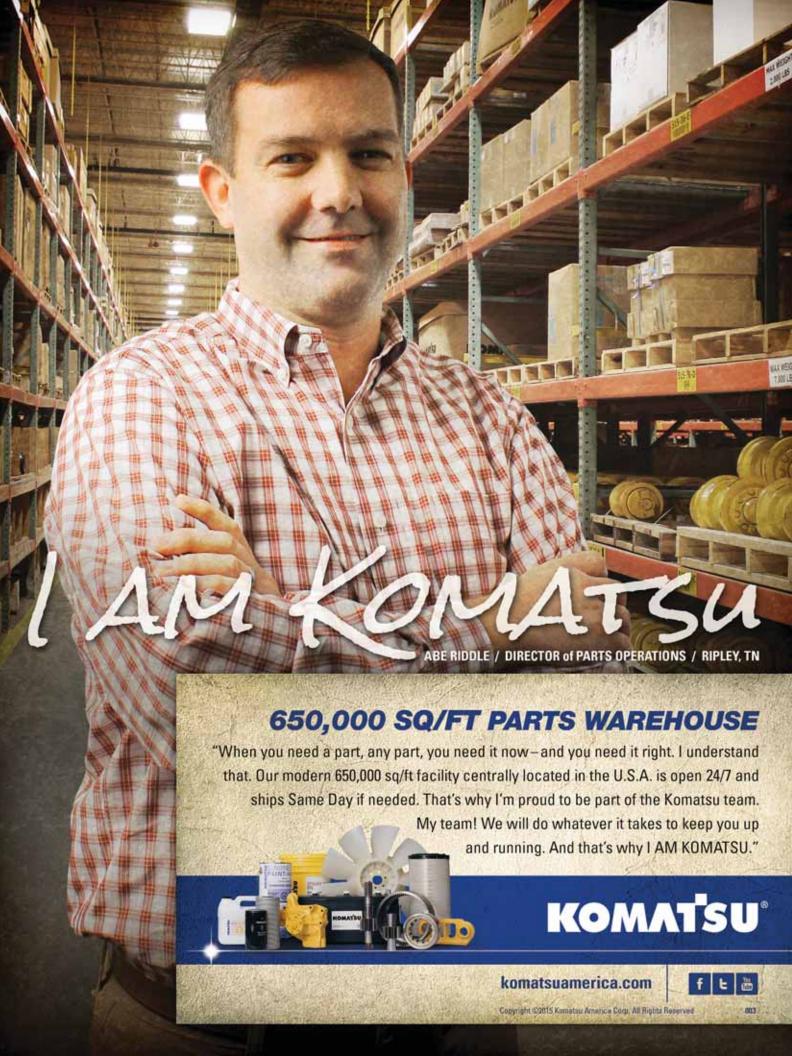


Steve Yolitz, Manager, Marketing Forestry, for Komatsu America Corp.

Quick Specs on the Komatsu XT-3 Series						
Model	Operating Weight	Peak Horsepower	Swing Torque			
XT430-3 (non-leveling)	62,240 lbs.	300 hp	58,400 lbft.			
XT430L-3	64,460 lbs.	300 hp	58,400 lbft.			
XT445L-3	68,180 lbs.	300 hp	58,400 lbft.			
XT460L-3	74,320 lbs.	300 hp	58,400 lbft.			



Komatsu's new XT-3 Series of track feller bunchers and harvesters provides significant improvements in production and reliability compared to previous models.







STRONG CHOICES

Komatsu introduces new intelligent Machine Control, Tier 4 Final version of popular D65 dozer

Komatsu continues to lead by example in dozer automation and integration with its new D65PXi-18. Like the other members of the integrated machine-control family, the new dozer offers automatic blade control from rough-cut to finish grade.

The D65PXi-18 is an intelligent Machine Control (iMC) dozer with factory-integrated machine-control system components, which eliminate the need for traditional blade-mounted masts and cables. A Global Navigation Satellite System antenna is

mounted on top of the cab. Additional components include robust, stroke-sensing hydraulic cylinders, an enhanced inertial measurement unit and a touch-screen display mounted inside the cab.

A stroke-sensing angle cylinder measures the actual angle of the blade for high-precision grading accuracy on a cross-slope, whether the blade is angled or not. The dozers are significantly more efficient compared to



Jason Anetsberger, Komatsu Product Manager, Intelligent Machine Control

Continued

* With standard SIGMADOZER blade ** With standard PAT blade	
Total Control of the	Chu

Chuck Murawski. Komatsu Product Manager, Dozers

Qui	ck Specs on the Komats	u D651-18 and D65-18 I	Jozers	VVIIII SIIIIIIIII I SIGIVA IBOZEK VIIII
Model	Net Horsepower	Operating Weight	Blade Capacity	** With standard PAT blade
D65EXi-18	217 hp	45,780 lbs.	7.3 cu. yds.*	The second secon
D65PXi-18	217 hp	50,420 lbs.	5.8 cu. yds.**	《 图 图 》
D65EX-18	217 hp	45,628 lbs.	7.34 cu. yds.*	
D65WX-18	217 hp	48,760 lbs.	7.72 cu. yds.*	
D65PX-18	217 hp	51,960 lbs.	5.78 cu. yds.**	
		HOMATSU		GSPU GSPU
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Komatsu's new D65PXi-18 intelligent Machine Control dozer features automatic blade control from rough-cut to finish grade. Operators can also adjust the blade-load settings to match actual material conditions for added efficiency.

The new D65s reduce fuel consumption, increase productivity

.. continued

conventional aftermarket machine-control systems, depending on operation and conditions.

"The system senses excess blade load during rough-cut and automatically raises the blade to minimize track slip, as needed, and to maintain momentum," said Jason Anetsberger, Komatsu Product Manager, Intelligent Machine Control. "It also automatically lowers the blade to push as much material as possible until the grade is reached, thereby maximizing production in all situations."

Selectable dozing modes

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

"As with all of our *intelligent* Machine Control dozers, the D65PXi-18 produces results that lower owning and operating costs associated with traditional blade-mounted sensors and makes the next generation of machine operators more productive and efficient," said Anetsberger.

New Tier 4 Final D65-18 dozers have more powerful engines, and the D65EXi-18, D65EX-18 and D65WX-18 dozers are equipped with a patented Komatsu SIGMADOZER blade that provides large-capacity dozing of 7.3, 7.34 and 7.72 cubic yards, respectively.



New, more powerful engine

The iMC dozers were one of many machines to receive an upgrade. All Komatsu D65PXi-18 dozers, whether iMC or not, feature a stronger, 217-horsepower engine that delivers high performance and low fuel usage and operating costs.

The all-new D65-18 also has an automatic transmission with lockup torque converter, which lowers fuel consumption and raises powertrain efficiency. The lockup mechanics of the torque converter automatically transfer engine power directly to the transmission, reducing fuel consumption by as much as 10 percent. Operators can easily choose from two gearshift modes, Automatic and Manual, to fit the appropriate application: Auto for general dozing and Manual for dozing and ripping in rough ground.

Patented SIGMADOZER blade

The D65-18 SIGMADOZER blade increases soil capture and limits spillage by rolling material to the center of the blade. It also reduces digging resistance, producing smoother material flow; more dozed soil with less power; and up to 15-percent-more productivity, compared to conventional Semi-U blades.

"The D65-18s are great, all-around machines," said Chuck Murawski, Komatsu Product Manager, Dozers. "They remain among the most popular in their size class because they offer excellent production for large dozing jobs but are small enough for finish grading on most jobsites. They manage to burn less fuel, while being more productive than their predecessors."

The D65-18 dozers come standard with Komatsu's new Operator Identification System, which reports key information for multiple operators, and the new Auto Idle Shutdown function that helps reduce idle time and operating costs. The new dozers have the latest version of KOMTRAX, providing data on fuel and DEF levels, operating hours, locations, cautions and other vital information. The machines are also covered by the pioneering Komatsu CARE maintenance and service program. ■





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MEETING, EXCEEDING EXPECTATIONS

General Manager Bruce Nelson says Komatsu's CMO is dedicated to high-quality products delivered quickly

QUESTION: What products are produced at the Chattanooga Manufacturing Operation (CMO)?

ANSWER: We currently produce six sizes of hydraulic excavators, ranging from the PC210LC-11 to the PC490LC-11. These models are primarily sold in North America, but we also export one model to Latin America and South America. In addition, we produce three sizes of forestry excavators, from a PC210LL-10 to a PC390LL-10, and four sizes of forestry tracked harvesters and tracked feller bunchers, from the XT430-3 to the XT460-3. We are the only Komatsu plant in the world that builds specialized forestry track machines, and we ship them all over the globe.

QUESTION: Why should a customer buy a machine produced at CMO?

ANSWER: The hydraulic excavators we build at CMO are also built in several other Komatsu factories around the world, in order to better serve local markets. Each factory uses the same parts, designs and quality standards, so users should not be able to tell the difference between an excavator built in a plant in Japan or the United Kingdom versus one built at CMO. In addition to high quality, CMO's mission is quick delivery with whatever options a customer may need. Our staff works regularly with distributors and customers to ensure we meet or exceed their expectations. Being a part of the North American market means we can offer options on our machines that are not normally found in other parts of the world. For example, we offer pipeline spec hydraulic excavators with single grouser tracks and severe-duty revolving-frame undercovers.

QUESTION: How do you prepare for new models, such as the Tier 4 Final products?

ANSWER: We start planning almost a year before our first build date, determining equipment

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.

Bruce Nelson, General Manager, Chattanooga Manufacturing Operation

Bruce Nelson started with Komatsu in 1993 as a welding engineer at the Chattanooga Manufacturing Operation. Nearly 20 years later, he became General Manager at CMO, where he oversees production of hydraulic excavators and forestry machines. During his tenure, Nelson served as Fabrication Manager, Y2K Project Manager, Operation Manager, SAP Project Manager and nine years as Senior Manager of Administration.

Nelson helped create Komatsu's Supply Chain Division in 2009 and was General Manager of that division until moving into the General Manager role at CMO in 2012, upon the retirement of Dennis Riddell.

A year prior to joining Komatsu, he graduated from Auburn University with a degree in Industrial Engineering and worked for a small manufacturing company. Nelson is a Certified Supply Chain Professional and is Certified in Production and Inventory Management.

Bruce enjoys vacationing in central Florida and taking cruises. He likes to spend time with his wife and two daughters, who enjoy being anywhere it's warm.

Supply Chain Division focused on quality, delivery, cost

... continued

General Manager Bruce Nelson says CMO has worked hard to reduce lead times to customers. In 2009, that was two months. Now, he says it averages three to five days to get a machine ready to ship after receiving a distributor order.





Four sizes of forestry tracked harvesters and tracked feller bunchers are produced at Komatsu's CMO, among them are new Dash-3 models, including the XT460.

Komatsu's Chattanooga Manufacturing Operation produces six sizes of hydraulic excavators, ranging from the PC210LC-11 to the PC490LC-11.



requirements and laying out a detailed schedule of events. For all model changes, we work closely with the engineering and manufacturing groups to understand the fabrication and assembly differences. We have weekly meetings with all departments involved to understand the status of everyone's activities and ensure we are all on schedule. We invite a staff member from the hydraulic excavator design group to stay at our plant during our first builds, so we have immediate feedback if we have any questions during the assembly process. After completing the first machine, we send it to our Cartersville Demonstration Center for operation and final evaluation. Once everything is complete, the product is released for sale to customers.

QUESTION: What are the markets (construction, utility) like now, and how do you adjust to ensure machines are available?

ANSWER: The construction-equipment market in North America has been growing throughout the last five years. Our plant works closely with Komatsu America's Supply Chain Division to make sure our production plans are in sync with market requirements. We use KOMTRAX to see usage trends by model, which helps us predict and verify marketing forecasts. We have worked hard during the last several years to reduce our lead times to our customers. The time from receiving a distributor order to making the machine ready to ship was two months in 2009. Now, it's three to five days, on average.

QUESTION: Do you encourage customers to visit CMO, and why or why not?

ANSWER: CMO always welcomes customer visits. We have customers at the plant on a weekly basis. A tour can be as small as one contractor with his wife and children passing through the Chattanooga area to as large as 75 people a day as part of Demo Days activities held just down the road at Cartersville. We love to show off our facility and allow people to see how the Komatsu machines, which we consider to be the best, are manufactured. Customers can see for themselves that we strive to keep the plant safe and clean for our workforce. They can also see how we build quality into each step of the process as frames are welded or as machines move down the assembly line.



Congressional Budget Office report shows feds spent \$96 billion on infrastructure

A Congressional Budget Office (CBO) report says the federal government's infrastructure spending was less than a third of what state and local governments put toward road and water system improvements in 2014. States spent \$320 billion, while the federal government's total was \$96 billion.

Of the federal spending, 57 percent went to maintaining existing infrastructure and operating expenses, while 43 percent was put into new construction. The report said

the impact of infrastructure spending was negatively affected by rising construction costs.

"Nominal public spending on infrastructure increased by 44 percent between 2003 and 2014, but because prices of materials and other inputs rose more quickly than nominal spending, real (inflation-adjusted) public purchases decreased, falling by 9 percent from their peak in 2003 to their level in 2014," said the CBO.



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NO IDLE 2.0

Latest initiative aims to reduce excessive idling and help your operators save you money



Bob Post, Komatsu Director of Marketing Communications



Goran Zeravica, Komatsu Distributor Development Manager

A few years ago, Komatsu began a mission to reduce excessive idling. Why? Because it negatively affects your bottom line. Komatsu continued its effort with a second No Idle Initiative, tracking more than 2,800 companies that signed up for the campaign, which lasted for three months. The participants could access training via the web and were given materials to promote the initiative, including items in Spanish and French-Canadian if requested.

During this initiative, 13 percent of participants received "High Achiever" status for all three months, meaning they reduced idle time by at least 5 percent each month, compared to a baseline measurement done before the initiative started. On average, this group reduced idle time by 15 percent. About half of participants earned Komatsu's High Achiever status at least one month during the campaign.

"Unnecessary idling wastes fuel; shortens the time between scheduled maintenance intervals, which increases downtime; and wracks up unproductive hours that lower resale costs when you decide to trade-in or sell a machine," said Goran Zeravica, Komatsu Distributor Development Manager. "In nearly every case, it would be better to shut down a machine when it's not in production."

As part of Komatsu's efforts to end excessive idling, it launched a very successful "No Idle Initiative" in 2012. The main goal during that campaign was for each participant to reduce idle time by 20 percent. About 25 percent of the 1,200 participants achieved that mark or better, and several more came close.

"We geared this campaign more toward operators who are on the front lines when it comes to idle time, because that's what customers said was most important after the last initiative," said Bob Post, Komatsu Director of Marketing Communications. "It included several promotional items that participants could put in the cabs of their machines or place in other strategic locations on the jobsite or in the office as constant reminders to idle for only five minutes during nonproductive times, shut down the machine at lunch and use a three-minute cool down at the end of the day."

"Socially responsible"

Post and Zeravica said both initiatives proved successful, and Komatsu will continue to use campaigns such as No Idle to promote awareness of cost-saving measures that reduce owning and operating expenses. "We consider this socially responsible marketing that's designed to help customers save money," said Post. "Our aim is to promote additional meaningful ways to do that, such as using economy mode versus power mode whenever applicable."





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Manufacturer/Model	Description	Serial No.	Year	Hours	Price
CRAWLER DOZE	RS				
KOMATSU D375A-6	U BLADE, SS RIPPER	60060	2012	1,640	POR
KOMATSU D375A-6	U BLADE, SS RIPPER	60053	2011	5,821	\$570,000
KOMATSU D155AX-7	U BLADE, MS RIPPER	90086	2012	1,990	POR
KOMATSU D85EX-15E0	SU, A/C, MS RIPPER	12116	2014	1,660	POR
KOMATSU D65WX-17	PAT, MS RIPPER	1873	2013	1,727	POR
KOMATSU D65EX-17	SIGMA, A/C, MS RIPPER	1267	2012	1,639	POR
KOMATSU D65PX-17	S BLADE, A/C	1991	2013	2,872	POR
KOMATSU D61EX-15E0	PAT BLD, A/C, RIPPER	B47007	2012	893	POR
KOMATSU D51EX-22	PATBLD, A/C	B13348	2014	342	POR
KOMATSU D39EX-23	PAT BLD, A/C, RIPPER	90107	2013	2,131	POR
WHEEL LOADERS					
KOMATSU WA500-7	7.5YD, XHA, STRGWHEEL, SCALE, A LUBE	10016	2012	2,595	POR
KOMATSU WA500-6	GP BUCKET, BIAS, SCALE,	55028	2006	10,614	POR
KOMATSU WA470-6	GP BUCKET, RDLS	90750	2012	4,851	\$240,000
KOMATSU WA380-7	4.3YD, RDLS	10004	2012	4,471	\$192,500
KOMATSU WA380-6	RDLS, QC, MONO, BUCKET	A53229	2007	4,837	\$170,000
CAT 992G	ROCK BUCKET	ADZ00131	2000	39,952	POR
VOLVO L180G	CHIP BUCKET	L180GE0001950	2012	5,002	\$185,000
VOLVO L180G	OTHI BOOKET	E1000E0001730	2012	3,002	\$105,000
HYDRAULIC EXC		2100020001730	2012	3,002	\$103,000
		55215	2009	8,425	•
HYDRAULIC EXC	AVATORS				
HYDRAULIC EXC KOMATSU PC800LC-8	AVATORS 15' ARM, CTWTRMVR, QC	55215	2009	8,425	\$425,000
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB	55215 A40160	2009 2012	8,425 2,582	\$425,000 POR
HYDRAULIC EXC COMATSU PC800LC-8 COMATSU PC490LC-10 COMATSU PC350HD-8 COMATSU PC308USLC-3E0	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS	55215 A40160 A00022	2009 2012 2011	8,425 2,582 5,242	\$425,000 POR POR
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10 KOMATSU PC350HD-8	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC	55215 A40160 A00022 30046	2009 2012 2011 2006	8,425 2,582 5,242 7,597	\$425,000 POR POR \$145,000
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10 KOMATSU PC350HD-8 KOMATSU PC308USLC-3E0 KOMATSU PC240LC-10 KOMATSU PC210LC-10	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB,	55215 A40160 A00022 30046 90064	2009 2012 2011 2006 2013	8,425 2,582 5,242 7,597 2,534	\$425,000 POR POR \$145,000 POR
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10 KOMATSU PC350HD-8 KOMATSU PC308USLC-3E0 KOMATSU PC240LC-10 KOMATSU PC210LC-10 KOMATSU PC228USLC-3N	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB, 9'7 ARM, QC, THUMB	55215 A40160 A00022 30046 90064 450697	2009 2012 2011 2006 2013 2013	8,425 2,582 5,242 7,597 2,534 1,696	\$425,000 POR POR \$145,000 POR POR
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10 KOMATSU PC350HD-8 KOMATSU PC308USLC-3E0 KOMATSU PC240LC-10 KOMATSU PC210LC-10 KOMATSU PC228USLC-3N KOMATSU PC170LC-10	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB, 9'7 ARM, QC, THUMB 9'6 ARM, QC	55215 A40160 A00022 30046 90064 450697 32599	2009 2012 2011 2006 2013 2013 2006	8,425 2,582 5,242 7,597 2,534 1,696 5,852	\$425,000 POR POR \$145,000 POR POR POR
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10 KOMATSU PC350HD-8 KOMATSU PC308USLC-3E0 KOMATSU PC240LC-10	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB, 9'7 ARM, QC, THUMB 9'6 ARM, QC 8'7 ARM, QC, THUMB,	55215 A40160 A00022 30046 90064 450697 32599 30080	2009 2012 2011 2006 2013 2013 2006 2012	8,425 2,582 5,242 7,597 2,534 1,696 5,852 1,017	\$425,000 POR POR \$145,000 POR POR POR
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10 KOMATSU PC350HD-8 KOMATSU PC308USLC-3E0 KOMATSU PC240LC-10 KOMATSU PC210LC-10 KOMATSU PC228USLC-3N KOMATSU PC170LC-10 KOMATSU PC130-8 KOMATSU PC55MR-3	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB, 9'7 ARM, QC, THUMB 9'6 ARM, QC 8'7 ARM, QC, THUMB, 8' ARM, BUCKET	55215 A40160 A00022 30046 90064 450697 32599 30080 84044	2009 2012 2011 2006 2013 2013 2006 2012 2012	8,425 2,582 5,242 7,597 2,534 1,696 5,852 1,017 1,394	\$425,000 POR POR \$145,000 POR POR POR POR
HYDRAULIC EXC COMATSU PC800LC-8 COMATSU PC490LC-10 COMATSU PC350HD-8 COMATSU PC350HD-8 COMATSU PC308USLC-3E0 COMATSU PC240LC-10 COMATSU PC210LC-10 COMATSU PC228USLC-3N COMATSU PC170LC-10 COMATSU PC130-8 COMATSU PC55MR-3 COMATSU PC45MR-3	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB, 9'7 ARM, QC, THUMB 9'6 ARM, QC 8'7 ARM, QC, THUMB, 8' ARM, BUCKET A/C, RDLNR, QC, THUMB	55215 A40160 A00022 30046 90064 450697 32599 30080 84044 17403	2009 2012 2011 2006 2013 2013 2006 2012 2012 2013	8,425 2,582 5,242 7,597 2,534 1,696 5,852 1,017 1,394 1,270	\$425,000 POR POR \$145,000 POR POR POR POR POR
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10 KOMATSU PC350HD-8 KOMATSU PC308USLC-3E0 KOMATSU PC240LC-10 KOMATSU PC210LC-10 KOMATSU PC228USLC-3N KOMATSU PC170LC-10 KOMATSU PC130-8	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB, 9'7 ARM, QC, THUMB 9'6 ARM, QC 8'7 ARM, QC, THUMB, 8' ARM, BUCKET A/C, RDLNR, QC, THUMB, A/C, RDLNR, QC, THUMB,	55215 A40160 A00022 30046 90064 450697 32599 30080 84044 17403 6562	2009 2012 2011 2006 2013 2013 2006 2012 2012 2013 2013	8,425 2,582 5,242 7,597 2,534 1,696 5,852 1,017 1,394 1,270 953	\$425,000 POR POR \$145,000 POR POR POR POR POR POR
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10 KOMATSU PC350HD-8 KOMATSU PC308USLC-3E0 KOMATSU PC240LC-10 KOMATSU PC210LC-10 KOMATSU PC228USLC-3N KOMATSU PC170LC-10 KOMATSU PC130-8 KOMATSU PC55MR-3 KOMATSU PC45MR-3 KOMATSU PC35MR-3 DEERE 600CLC	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB, 9'7 ARM, QC, THUMB 9'6 ARM, QC 8'7 ARM, QC, THUMB, 8' ARM, BUCKET A/C, RDLNR, QC, THUMB A/C, RDLNR, QC, THUMB, 24", 48" BKT A/C, PAT BLADE, RUBBER TRK, WG/QC 37" BUCKET	55215 A40160 A00022 30046 90064 450697 32599 30080 84044 17403 6562 18875	2009 2012 2011 2006 2013 2013 2006 2012 2012 2013 2013 2013	8,425 2,582 5,242 7,597 2,534 1,696 5,852 1,017 1,394 1,270 953 546	\$425,000 POR POR \$145,000 POR POR POR POR POR POR POR
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10 KOMATSU PC350HD-8 KOMATSU PC308USLC-3E0 KOMATSU PC240LC-10 KOMATSU PC210LC-10 KOMATSU PC228USLC-3N KOMATSU PC170LC-10 KOMATSU PC130-8 KOMATSU PC55MR-3 KOMATSU PC45MR-3 KOMATSU PC35MR-3 COMATSU PC35MR-3	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB, 9'7 ARM, QC, THUMB 9'6 ARM, QC 8'7 ARM, QC, THUMB, 8' ARM, BUCKET A/C, RDLNR, QC, THUMB A/C, RDLNR, QC, THUMB, 24", 48" BKT A/C, PAT BLADE, RUBBER TRK, WG/QC 37" BUCKET	55215 A40160 A00022 30046 90064 450697 32599 30080 84044 17403 6562 18875	2009 2012 2011 2006 2013 2013 2006 2012 2012 2013 2013 2013	8,425 2,582 5,242 7,597 2,534 1,696 5,852 1,017 1,394 1,270 953 546	\$425,000 POR POR \$145,000 POR POR POR POR POR POR POR
HYDRAULIC EXC COMATSU PC800LC-8 COMATSU PC490LC-10 COMATSU PC350HD-8 COMATSU PC308USLC-3E0 COMATSU PC240LC-10 COMATSU PC210LC-10 COMATSU PC228USLC-3N COMATSU PC170LC-10 COMATSU PC130-8 COMATSU PC55MR-3 COMATSU PC45MR-3 COMATSU PC45MR-3 COMATSU PC35MR-3 COMATSU PC35MR-3 COMATSU PC45MR-3	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB, 9'7 ARM, QC, THUMB 9'6 ARM, QC 8'7 ARM, QC, THUMB, 8' ARM, BUCKET A/C, RDLNR, QC, THUMB A/C, RDLNR, QC, THUMB, 24", 48" BKT A/C, PAT BLADE, RUBBER TRK, WG/QC 37" BUCKET	55215 A40160 A00022 30046 90064 450697 32599 30080 84044 17403 6562 18875 FF600CX951053	2009 2012 2011 2006 2013 2013 2006 2012 2012 2013 2013 2013 2012 2004	8,425 2,582 5,242 7,597 2,534 1,696 5,852 1,017 1,394 1,270 953 546 9,136	\$425,000 POR POR \$145,000 POR POR POR POR POR POR POR
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10 KOMATSU PC350HD-8 KOMATSU PC308USLC-3E0 KOMATSU PC240LC-10 KOMATSU PC210LC-10 KOMATSU PC228USLC-3N KOMATSU PC170LC-10 KOMATSU PC130-8 KOMATSU PC55MR-3 KOMATSU PC45MR-3 KOMATSU PC45MR-3 COMATSU PC35MR-3 COMATSU PC35MR-3	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB, 9'7 ARM, QC, THUMB 9'6 ARM, QC 8'7 ARM, QC, THUMB, 8' ARM, BUCKET A/C, RDLNR, QC, THUMB A/C, RDLNR, QC, THUMB, 24", 48" BKT A/C, PAT BLADE, RUBBER TRK, WG/QC 37" BUCKET	55215 A40160 A00022 30046 90064 450697 32599 30080 84044 17403 6562 18875 FF600CX951053	2009 2012 2011 2006 2013 2013 2006 2012 2012 2013 2013 2013 2012 2004	8,425 2,582 5,242 7,597 2,534 1,696 5,852 1,017 1,394 1,270 953 546 9,136	\$425,000 POR POR \$145,000 POR POR POR POR POR POR \$109,000
HYDRAULIC EXC KOMATSU PC800LC-8 KOMATSU PC490LC-10 KOMATSU PC350HD-8 KOMATSU PC308USLC-3E0 KOMATSU PC240LC-10 KOMATSU PC210LC-10 KOMATSU PC228USLC-3N KOMATSU PC170LC-10 KOMATSU PC130-8 KOMATSU PC55MR-3 KOMATSU PC45MR-3 KOMATSU PC35MR-3 COMATSU PC35MR-3 COMATSU PC35MR-3	AVATORS 15' ARM, CTWTRMVR, QC 13' ARM, QC, THUMB 10'6 ARM, QC, MEGA HYDS 11'6A, QC 10'A, QC, THUMB, 9'7 ARM, QC, THUMB 9'6 ARM, QC 8'7 ARM, QC, THUMB, 8' ARM, BUCKET A/C, RDLNR, QC, THUMB A/C, RDLNR, QC, THUMB, 24", 48" BKT A/C, PAT BLADE, RUBBER TRK, WG/QC 37" BUCKET	55215 A40160 A00022 30046 90064 450697 32599 30080 84044 17403 6562 18875 FF600CX951053	2009 2012 2011 2006 2013 2013 2006 2012 2012 2013 2013 2013 2012 2004	8,425 2,582 5,242 7,597 2,534 1,696 5,852 1,017 1,394 1,270 953 546 9,136	\$425,000 POR POR \$145,000 POR POR POR POR POR POR \$109,000



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Manufactures/Madel	Description	Carial No.	Vasu	Harma	Duiaa
Manufacturer/Model	Description	Serial No.	Year	Hours	Price
FORESTRY EQUI	PMENT				
TIMBCO 445FXL	BUNCHER	A10005	2011	7,000	\$245,000
TIMBCO 445EXL	BUNCHER, 22/360 #22B859	FT4C2721120505	2006	12,300	\$149,500
KOMATSU PC350LL-7E0	LOG LOADER	A50010	2012	4,147	\$350,000
KOMATSU PC270LL-7L	LOG LOADER	A86013	2008	9,771	POR
VALMET EX10	370E SN 11392	ET4C2842120506	2006	8,271	\$152,000
VALMET 890.3	VT FORWARDER, BRUKS CHIPPER	310249	2007	5,824	\$565,000
DEERE 2154D	LOG LOADER, 4552 GRAPPLE	1FF2154DAB0210202	2011	8,431	\$195,000
ARTICULATED H	ALII TRUCKS				
No. of the last of		A40257	2005	10.0/0	#250.000
KOMATSU HD785-5LC	79YD HAUL TRUCK	A10357	2005	19,068	\$250,000
KOMATSU HD785-5LC	79YD HAUL TRUCK	A10358	2005	23,540	\$250,000
KOMATSU HD605-7	HAUL TRUCK	7115	2004	15,659	\$225,000
KOMATSU HD605-7	HAUL TRUCK	7125	2004	15,857	\$250,000
KOMATSU HD325-7	31YD, PAYLOAD SYSTEM	7353	2009	19,400	\$135,000
KOMATSU HM400-3	ARTIC.TRUCK, TAIL CATE	3200	2013	5,424	POR
KOMATSU HM300-2	ARTIC.TRUCK, TAILGATE	2868	2011	2,643	POR
CAT 777D	100T HAUL TRUCK	3PR00540	1997	51,032	POR
AGGREGATE EQ	UIPMENT				
JCI 2650	JAW PLANT W/50X20 FEEDER	413420	2014	1,282	POR
JCI FT2650	PIONEER TRACK MOUNT JAW, MAGNET	413683	2014	240	POR
JCI FT2650	PIONEER TRACK MOUNT JAW	412081	2012	1,892	POR
METSO LT106	METSO JAW CRUSHER	77341	2013	1,171	POR
NORDBERG 1560	NORDBERG CONE PLANT	1560331	1991		POR
METSO HP400	REBUILT METSO CONE, BARE	HP400489	2004	1	\$225,000
METSO HP400	PORTABLE METSO CONE	2012F025	2013	181	POR
JCI K300/6203	JCI KODIAK CLOSE CIRCUIT PLANT	P111643	2011	2,353	POR
SYMONS 4.25	PORTABLE CONE PLANT, W/ 5X16	4106		,	\$115,000
PIONEER 2454	ROLL CRUSHER PLANT, W/ 5X16	33-006			\$55,000
CEDARAPIDS 7203-38	CEDARAPIDS SCREEN PLANT	2021/2040	2012		POR
METSO ST3.5	METSO TRACK SCREEN	76645	2012	1,014	POR
METSO ST272	METSO TRACK SCALPING SCREEN	77255	2013	320	POR
METSO CV100	METSO SCREEN ALL	30206	2013	277	POR
MISCELLANEOU	S	A Committee			
HAMM 3520	87"HAMM SMOOTH SINGLE	H1761689	2012	832	POR
HAMM 3412	84"HAMM SMOOTH SINGLE, A/C	H1802560	2013	1,505	POR
HAMM 3412	84"HAMM SMOOTH SINGLE	H1802584	2013	992	POR
HAMM 3410	84" HAMM SMOOTH SINGLE	H1690968	2007	1,846	POR
HAMM HD140VO	84"HAMM ASPHALT, OZZIE	H1840044	2009	3,135	\$105,000
HAMM HD+120VO	78"HAMM ASPHALT, OZZIE	H1840202	2010	1,175	POR
HAMM HD0120V	78"HAMM ASPHALT, OZZIE	H1820070	2008	2,540	\$95,000
HAMM HD+110VO	66"HAMM ASPHALT, OZZIE	H1850644	2013	1,004	POR
IR SD115D	IR ROLLER, CAB, A/C, PADSHELL	153758	1998	1,806	\$52,500
ROSCOE RB48	BROOM, A/C	79848	2012	593	POR
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