

LINDER LINK

A publication for and about Linder Industrial Machinery customers • 2015 No. 3

LINDER | INDUSTRIAL
MACHINERY
COMPANY



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KOMATSU®

MESSAGE FROM THE PRESIDENT



John Coughlin

**A broad range
of new
equipment**

LINDER | INDUSTRIAL MACHINERY COMPANY

Dear Valued Customer:

This issue of your Linder Link showcases the broad range of equipment that Komatsu carries. It features everything from a new tight-tail-swing PC78US-10 excavator to larger equipment, such as the HM400-5 articulated haul truck and the D155AXi-8 *intelligent* Machine Control (iMC) dozer.

Yes, you read that correctly – Komatsu introduced an iMC D155 dozer. The 90,610-pound, 354-horsepower construction/quarry machine is now the largest in the Komatsu iMC-dozers lineup. Like its predecessor, it features the patented SIGMADOZER blade, and like its iMC brethren, it works without the mast and cables associated with traditional aftermarket GPS systems. Read the article to see if the D155AXi-8 is a good fit for your company.

You will also want to read the article on Komatsu's new PC210LC-11 excavator. With this latest model, Komatsu has once again raised the bar for excellence in excavators. The PC210LC-11 offers more horsepower and operating weight, while using less fuel and making less noise.

Finding ways to be more productive and efficient is a big part of doing business for excavation, mining, forestry and other types of companies that use equipment. If you are looking to get the most out of your Komatsu machinery, check out the article about Komatsu's "Kwick Tips" videos, produced to help you better understand the functions and features of your equipment.

This time of year tends to be very busy with multiple projects and deadlines. It can be easy to forget about scheduled maintenance. If you have a Komatsu Tier 4 machine, such as those featured here, rest assured that we're on top of them and will take care of your scheduled maintenance through the Komatsu CARE program. We can help with your older machines too.

Please call or stop by one of our branch locations and let us show you how we can be of service.

Sincerely,
Linder Industrial Machinery Company



John Coughlin
President

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See how performing quality work and routinely beating schedules has helped this Charlotte firm grow rapidly.

CRUSH-IT, INC.

Meet this Florida Gulf Coast crushing/recycling company that specializes in doing quality work in tight spaces.

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Check out why drone and unmanned aerial vehicle (UAV) use is expected to gain prominence as construction moves into the future.

PRODUCT SPOTLIGHT

Explore Komatsu's new PC78US-10 and learn how it increases productivity in limited-space applications thanks to unique design features.

PRODUCT IMPROVEMENT

Discover how Komatsu's versatile new PC210LC-11 excavator is doing more with less.

APPLIED TECHNOLOGY

Komatsu introduced the D155AXi-8, its first *intelligent* Machine Control construction/quarry dozer. Read about it inside.

NEW PRODUCT

Take a look at Komatsu's HM400-5 articulated dump truck and see how its Tier 4 Final engine optimizes performance.

WEB SUPPORT

Do you have a question about your Komatsu equipment? Komatsu's Kwik Tips videos likely have the answer just one click away.

PAVING PRODUCTS

Take a look at Wirtgen's AutoPilot stringless system, which makes slipform projects performed with its SP 15 machines even more efficient.

INDUSTRY NEWS

Read about the Department of Transportation's audit of state-highway spending, and the solutions groups are pushing for.

GUEST OPINION

Learn how the Associated General Contractors of America wants to improve safety in highway construction zones, for workers and drivers.

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HORSEPOWER SITE SERVICES

Quality work and routinely beating schedules has helped this Charlotte firm grow rapidly



Ryan Hamrick,
Owner

Ryan Hamrick grew up working in his family's concrete contracting business, earned a civil engineering degree from North Carolina State and, upon graduation, got into real estate development. He managed projects and eventually became a partner in the development business, but the timing – the start of the Great Recession – wasn't the best. His partners decided to mothball projects that were on the board and take a break from the business. Hamrick, however, needed a job and saw an opportunity.

Horsepower Site Services has owned Komatsu excavators for many years. Currently, it has 10 Komatsu trackhoes in its fleet, including this PC490LC.

▶ VIDEO



"I started my own company, Horsepower Site Services, to complete the projects our development company had begun," he recalled. "As the recession deepened and banks started foreclosing on troubled projects, they were often looking for somebody to complete those jobs, or at least bring the sites into erosion-control compliance. Since I already had relationships with many of those lenders, we did a lot of that in 2009 and 2010. As the economy has improved, we've established a good rapport with homebuilders and general contractors, and we've grown steadily."

Today, Charlotte-based Horsepower Site Services has about 70 employees. It is a heavy civil firm that does a wide range of residential, commercial and industrial sites – from subdivisions and retail stores, to schools and hospitals. The company provides a full slate of site construction services, including grading, utilities, and curb and gutter.

"We work within about a 50-mile radius of Charlotte and offer customers a turnkey site package," said Hamrick. "Except for clearing and asphalt paving, which we sub out, we do everything in-house with our own crews. We believe that helps us maximize productivity, which allows us to meet and beat schedules. That's one of our calling cards. We do quality work and get it done fast."

"An example is a temporary storage facility for Metrolina Builders," he explained. "We did grading, water, sewer and storm drain and delivered all the pads weeks ahead of schedule – even before they had building permits. That's how we approach all of our jobs. We realize that for the project owner, time is money, so we work accordingly. It's probably the main reason our regular customers come to us."



▶ VIDEO

Horsepower Site Services recently added two Komatsu D61PXi *intelligent* Machine Control dozers. “They are truly state-of-the-art machines,” said Senior Project Manager Miles Hedrick. Horsepower Owner Ryan Hamrick had even more praise for the dozers. “Bottom line, our Komatsu D61i dozers have helped us do our jobs faster, better and more cost-effectively.”

We negotiate a fair price and bring added value to the job by doing it well and doing it fast.”

Utility Superintendent Randy Reynolds says speed is definitely important to Horsepower’s customers, but it’s not the only thing. “We work fast but we also keep our jobsites clean. They look nice while we’re doing the work, which customers appreciate. Ryan emphasizes professionalism and productivity and wants our reputation as a company to be top-notch, so that’s what we strive for.”

Talented, experienced workforce

One of the reasons Horsepower is able to routinely complete projects on time or early is due to a talented and dedicated workforce. Helping Hamrick lead the team are Grading Superintendent Eric Bonds, Senior Project Manager Miles Hedrick and Reynolds.

“I tried to bring on people who had a lot of knowledge, experience and great attitudes,” said Hamrick. “That describes not just top management but all of our employees. We’ve experienced a lot of success in a short amount of time. I attribute that to our employees, especially those in the field doing the work.”

Hamrick also credits his wife, Scarlet, who in the early days helped him do erosion control and “anything else necessary to make ends meet.” Today, she runs a separate company that owns Horsepower Site Services’ equipment.

iMC dozers: “A better way to grade”

Horsepower Site Services has owned Komatsu excavators for many years. The company currently has 10 Komatsu trackhoes, ranging from tight-tail-swing PC138s to a PC300HD. It’s also leasing a new PC490LC-11 from Linder Industrial Machinery that Hamrick says has helped a motivated crew “increase production levels significantly.”

Earlier this year, at the urging of Senior Project Manager Miles Hedrick, the company also added two new Komatsu D61PXi *intelligent* Machine Control dozers.

“I had worked with GPS and knew we needed to embrace the technology or risk being left behind,” said Hedrick. “Komatsu’s iMC dozers are truly state-of-the-art machines with superior GPS and automated blade control features. They are the only dozers with GPS built into the machines at the factory. Combined with a base station and rover, they are revolutionizing grading.”

“The D61i dozers have exceeded my expectations,” said Grading Superintendent Eric Bonds. “They have basically eliminated surveying on our jobs, which saves time and money. The iMC dozers have also improved our productivity. Our grades are now virtually always right the first time, so there’s little-to-no



Discover more at
TheLinderLink.com

Continued . . .

Horsepower strives to be a progressive industry leader

... continued



Randy Reynolds,
Utility
Superintendent

rework. I'm old school – but this is a better way to grade."

"Bottom line, our Komatsu D61i dozers have helped us do our jobs faster, better and more cost-effectively," said Hamrick. "On a recent job, I estimate we saved as much as \$25,000 in surveying costs alone. We're very pleased with the units and firmly believe they've helped make us a better company."

In addition to the equipment itself, Hamrick says he appreciates the support Horsepower

receives from Linder Industrial Machinery Sales Rep Bill Cross and Customer Support Manager John Suggs. "Bill, John and everybody at the Linder Concord branch have been great to work with. As an equipment user, I need dealer support and Linder has always been there for us."

A progressive industry leader

Horsepower Site Services has experienced remarkable growth, as much as 70 percent per year, since opening its doors six years ago.

"Of course, 70 percent annual growth can't continue, but we do want to always be moving forward," said Hamrick. "We don't have to be the biggest. In fact, I like that we're small enough to add a personal touch so our customers don't get lost in the shuffle. But I do want us to be a progressive industry leader in this area, and be recognized as a high-character, high-integrity firm. I think we're well on our way to reaching those goals. As long as we keep doing what we're doing – hiring top people and putting customers first – I'm optimistic we'll get there in the not-too-distant future." ■



Eric Bonds,
Grading
Superintendent



Horsepower Site Services Owner Ryan Hamrick (left) meets with Linder Industrial Machinery Sales Rep Bill Cross.



Miles Hedrick,
Senior Project
Manager

Horsepower Site Services has grown by as much as 70 percent per year since opening six years ago. Owner Ryan Hamrick calls on Linder Industrial Machinery Sales Rep Bill Cross and Customer Support Manager John Suggs for equipment and support. "Bill, John and everybody at the Linder Concord branch have been great to work with," said Hamrick.



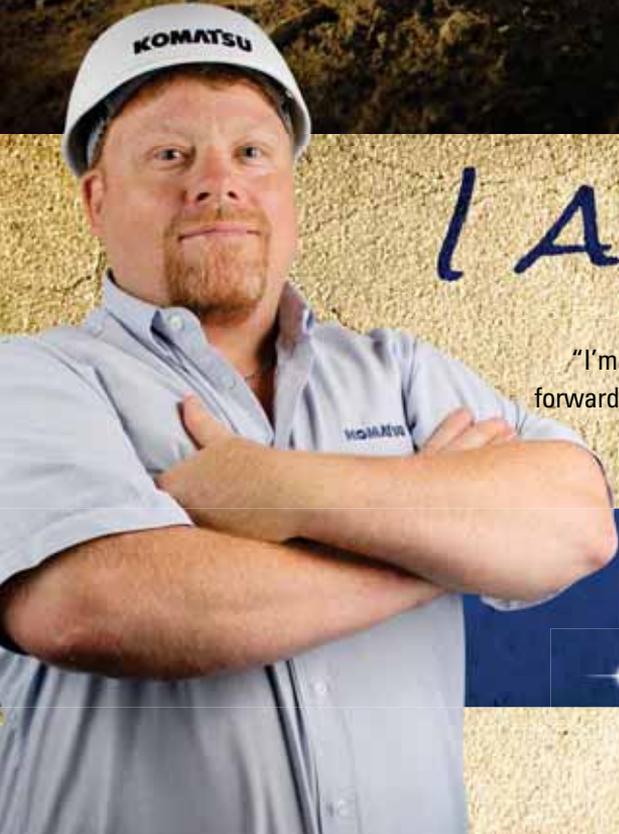
▶ VIDEO

D61PXi-23



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CRUSH-IT, INC.

This Florida Gulf Coast crushing/recycling firm specializes in doing quality work in tight spaces



Dave Richardson,
Owner/President

In 1991, Dave Richardson started Two R, a site work company in Osprey, Florida, south of Sarasota. In 2002, he switched the focus of his company to crushing/recycling and renamed the firm Crush-It.

“I was working with a trucking company and saw a need for crushing and recycling, which I suspected would grow in the coming years,” Richardson recalled. “I started with one crusher and maybe a couple of employees. Today, we have eight crushers and crews. Much of our work is for companies in the Tampa/St. Petersburg area, but a lot of our customers travel throughout Florida. If a good customer has a big job in Miami, Jacksonville or anywhere else in the state – and they want us to crush and recycle for them – we’re happy to be part of their team. We’re all about relationships.”

Crush-It recycles asphalt from roads, parking lots and waste from asphalt plants. It also recycles

concrete from highways, building demolition and wash-out from ready-mix trucks. Crushed material gets re-used, typically as road base, fill material or paver product. In addition to crushing and recycling on-site for customers, Crush-It also has a recycle yard in Tampa where it accepts clean concrete and asphalt rubble, millings, block, tile and brick, which it crushes for future use.

“Asphalt producers, concrete recyclers and site developers are our main customers,” said Richardson’s stepson and Vice President, John Wohlwend. “They build stockpiles at their locations. When their stockpile gets big, they bring us in to crush.”

“Recycling is important because it’s good for the environment and it saves money,” he noted. “Take site development that includes demolition, for example. When a structure is torn down to be replaced with something new,

This Crush-It operator uses a Komatsu WA380 to feed a crusher while recycling at a Tampa asphalt plant. “Asphalt producers, concrete producers and site developers are our main customers,” said Vice President John Wohlwend. “They build stockpiles at their locations. When the stockpile gets big, they bring us in to crush.”





Crush-It runs primarily Komatsu equipment. This PC290LC is one of seven Komatsu hydraulic excavators the company owns. "For us, it's about uptime," said Owner/President Dave Richardson. "We count on our machines to work every day. Komatsus do that better than anything else we've tried."

and material is hauled off and disposed of in a landfill, virgin material has to be brought in as base. When we recycle, we process the demolished material for re-use on site. It's cheaper and easier because there's no trucking and no need to purchase new material."

Crush-It's jobs vary in size from 5,000 to 120,000 tons of material or more. The company then creates product that can be as fine as sand, or as large as 4 inches.

"We take pride in producing a quality product," said Wohlwend. "We want to hear from quality control engineers so we can make adjustments, if necessary, to ensure that we're achieving proper spec. Communication during and after the job is important because we want to learn if there's anything we can do better."

"We treat our smallest customer the same way we treat our largest customer – same respect and same quality of work," said Richardson. "I think one of our greatest strengths as a company is that we're self-sufficient and turnkey. Customers just have to tell us what they want and we'll get it done. We also have a good safety record, which is very important to customers."

"Something else we're really good at is working in tight spaces," said Superintendent

Gabriel Galeano. "Sometimes, a customer will warn us that there's not a lot of room. I tell them, 'Don't worry. We'll find a way to get it done.' And we do."

A team effort

Richardson credits the staff for much of Crush-It's success.

"We have great employees. We hire people as laborers and train them up. I believe every foreman we have started as a laborer. We want them to learn the 'Crush-It Way,' but beyond that, I like to give our employees a career path. Promoting from within gives our employees a challenge and hope. They know if they do a good job, they can get a better job."

Richardson relies on Wohlwend, Galeano and Purchasing Manager Andrew Fernandez to help him manage operations.

"Dave is the brains of the operation," said Wohlwend. "He has the experience, the vision and a great mind for finances. Andrew, Gabriel and I take care of much of the day-to-day workload. Job titles are deceiving. We're all 'hands-on' managers. The mindset here is we all do whatever needs to be done. If one of us needs to be a parts runner, operator or laborer for a day or a week – that's what we do."

Continued . . .

Crush-It provides turnkey crushing/recycling services

...continued

"It's a team effort that extends to our individual crews," added Fernandez. "We don't have any prima donnas. We're all here to help each other and make one another's lives and jobs easier. We have some of the best employees anywhere – hard working, trustworthy people. We don't have much turnover, so our crews are highly experienced. Because of the atmosphere of opportunity that John and Dave promote, our employees know they're important. As a result, they treat the company like it's their own."

"Dependable" Komatsu equipment

Each Crush-It crew uses a mobile crusher, a hydraulic excavator and a wheel loader, plus ancillary equipment as needed. The Crush-It fleet includes seven Komatsu excavators (three PC290s and four PC300s) and seven Komatsu WA380 wheel loaders.

"Komatsu equipment makes up a large majority of our fleet today," said Richardson. "For us, it's about uptime. We count on our machines to work every day. Komatsus do that better than anything else we've tried. They seem to be built stronger, so they rarely break down. We're in a tough environment, and our Komatsus stand up to it."

(L-R) Crush-It Superintendent Gabriel Galeano, Purchasing Manager Andrew Fernandez and Vice President John Wohlwend work closely with Linder Sales Rep Greg Woodard and other Linder personnel. "Dealer support is very important to us and Linder does an excellent job," said President Dave Richardson. "Linder is so good, we often use them to service our other brands in addition to our Komatsu machines."



"Komatsu excavators and wheel loaders are good, tough machines that are very fuel-efficient and last a long time," added Galeano. "Also, our operators like to run the Komatsus. That's important because if they like their machine and they're comfortable in it, they're more productive."

Also important to Crush-It is the support it receives from Linder Industrial Machinery. Sales Rep Greg Woodard, Customer Support Manager J.D. Goff and Plant City Service Manager Mike Meadows are all involved in ensuring that Crush-It receives the sales, parts and service it needs to be successful.

"The Linder Customer Service Manager program works very well for us," said Fernandez. "John and Dave deal with Greg, but when we need parts or service support, I call J.D. He's familiar with us and our operation. I make one call and he takes care of the rest – contacting the right people at Linder and making sure they get right on it."

"Dealer support is very important to us, and Linder does an excellent job providing the support we need," said Richardson. "Linder is so good, we often use them to service our other brands in addition to our Komatsu machines."

Steady growth

Crush-It has grown considerably since Richardson started it 13 years ago.

"We had some nice growth, then like everybody, we lost ground during the Great Recession, but we've bounced back," said Richardson. "Since about 2011, we've grown steadily and I think we'll continue to grow."

"The key for us will be to continue to provide the type of service that our customers have come to expect," added Wohlwend. "About 80 percent of our work is for repeat customers, so it's crucial that we do a good job for them and continue to earn their business. In addition, we're always looking for new customers who want a crushing partner that's reliable; will provide a quality product at a reasonable price; and is easy to work with. As long as we keep working hard and meeting our customers' needs, I'm optimistic about what the future holds for Crush-It and our employees." ■

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BIRDS-EYE VIEW

Expect drone, UAV use to gain prominence as construction moves into the future

Here is a look at new technology that's being used by some in the construction industry. Information was gathered from a variety of resources. The article is not intended to be all-encompassing, but rather a general look at what the future may hold.

Construction technology during the past few years has largely been focused on two places. One is on the ground, where increasingly sophisticated equipment is used to dig, grade and haul materials. The other is in space, where global positioning satellites pass over Earth and relay information to man and machinery for automatic grading and tracking equipment location, hours and other important information.

It seems that the next wave of technology is somewhere between the two as the use of drones/unmanned aerial vehicles (UAVs) in construction gains momentum. (Though technically drones and UAVs are not the same thing, the terms are used interchangeably in this article.) Companies are looking at employing "quadcopters" and other devices equipped with cameras to document projects. The UAVs can be controlled by computer, or in many cases, by smart devices, such as

phones and tablets, and allow the drones' birds-eye view to be seen on the screen in real time.

The technology has been around for a while, but it's still in its infancy and the debate is ongoing as to its effectiveness at this point.

The Federal Aviation Administration (FAA) continues to develop guidelines for its use, such as the current 400-foot flight ceiling for hobbyists. As long as the drone/UAV remains at that elevation or below, no special permit from the FAA is required, so construction companies use that as a measuring stick, along with keeping the device in "line of sight."

Groups speak with FAA

Under a 2012 law, the FAA is required to have UAVs integrated into U.S. airspace by the end of September 2015. It continues to develop regulations with input from various interested parties. Among them is the Association of Equipment Distributors (AED) which recently submitted comments to the federal agency's "proposal that would update the regulations that govern general aircraft operations to incorporate the use of the vehicles commonly referred to as 'drones' under certain circumstances."

The organization pointed out that many of the most common uses of UAVs are in sectors served by its members, and FAA regulations will have a significant impact on the market and dictate how businesses can take advantage of their use. AED suggested the FAA "provide a clear definition of 'direct participation' that includes a range of employees who might be operating at a construction site, and provide more flexibility to the rule's restriction to visual line-of-sight

Many companies have begun to employ drones/unmanned aerial vehicles (UAVs) in an effort to map and document jobsites. Numerous models are available that range greatly in price and quality.





Drones/UAVs can be controlled from the ground with computers, smart phones and tablets and provide a birds-eye view of a site on the device. Users control the flight path, and cameras can take pictures for documentation and other purposes. Aerial photo courtesy of Cadre Solutions Group.

operations to allow for drones to operate beyond the line of sight.”

AED said the federal government “will have to learn to keep pace with the constantly evolving industry as all manner of unmanned systems take to the skies... allowing more flexibility in the rules now for future technological development will save both industry and the agency considerable resources, given the complex and lengthy rulemaking process.”

Getting permission

The FAA seems to be giving due consideration. It recently granted a Vermont company an exemption from the prohibition of unmanned aerial vehicles for commercial use.

“Our main focus area is commercial and industrial,” said AirShark’s Jon Burdreski in a post on Vermont Public Radio’s website. “Energy plants, such as solar and wind systems that are difficult to access or consume large areas and need to be checked, can really benefit from these UAVs. Additionally,

certain construction projects need constant documentation, including bridge projects or larger commercial buildings. We believe these UAVs can greatly help the energy, transportation and construction markets.”

Keeping an eye on transportation infrastructure and the workers who build it is behind the Michigan Department of Transportation’s consideration to use drones. Engineer of Operations and Maintenance Steve Cook told TheTrucker.com, a website that covers the transportation industry, that safety is one good reason to use the devices.

“It takes workers out of the path of vehicles so they can operate these drones from the shoulder of the road or somewhere else,” he told TheTrucker, noting that drones could collect data much more quickly than people and to the benefit of drivers. “This way, all lanes of traffic can stay open, which will alleviate congestion,” he continued.

Drones or UAVs can also get close to objects, such as the underside of bridge decks. Workers can be on the ground controlling

Continued . . .

Drone technology provides a competitive edge

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a device's flight path, and high-resolution cameras can take pictures of cracks or other potential hazards for documentation and maintenance/repair planning.

Mapping jobsites

As the technology improves, drones may someday play a prominent role in surveying and mapping jobsites. Earlier this year, Komatsu launched a service in Japan called Smart Construction in an effort to further study and advance those potential capabilities. It includes a platform called KomConnect that will connect machinery and workers to a cloud platform in an effort to improve overall efficiency.

Komatsu teamed with Skycatch, a U.S. company, for its Smart Construction service, which uses Skycatch devices to conduct surveys and produce 3-D models that are turned into interactive jobsite maps. Drones are programmed to automatically fly over a set area and use sensors to collect data on

Komatsu teamed with Skycatch, a U.S. company, for its Smart Construction service, which uses Skycatch devices to conduct surveys and produce 3-D models that are turned into interactive jobsite maps. Drones are programmed to automatically fly over a set area and use sensors to collect data on the terrain below. One day, Komatsu expects to overlay civil-engineering plans onto the drones' 3-D models, which can then be loaded as data into machinery, such as *intelligent* Machine Control dozers.



the terrain below. One day, Komatsu expects to overlay civil-engineering plans onto the drones' 3-D models, which can then be loaded as data into machinery.

"Measuring a large construction site from the air is much easier than measuring it from the ground," said Akinori Onodera, President of the Komatsu unit overseeing Smart Construction, in a January Wall Street Journal article titled "Drones' Next Job: Construction Work." "The old way of measuring needed two people for one week. The drones can do it in one or two hours."

"Right now, drone technology is providing a competitive edge to the companies who've successfully adopted it," Skycatch CEO Christian Sanz told Gizmag Emerging Technology Magazine. "They use their equipment and resources more efficiently; communicate better through accurate maps and data; and now have a highly quantitative means of measuring their progress against their schedule. In the future, the construction industry will realize aggregate benefits, such as a much better safety record and fewer projects that are late and over budget."

He told the Wall Street Journal that he hopes Skycatch will provide drones to "thousands of Komatsu's sites all over the world, shaving costs and time," adding that Komatsu plans to lease at least 200 drones from Skycatch during the next several years.

Considerations before buying

Buying a drone or UAV is largely a personal decision. This is obviously a "you get what you pay for" proposition. Prices vary widely from a few hundred dollars to several thousand dollars, depending on exactly what it will be used for. If you want one that will simply record a jobsite, a smaller, less-expensive version with a camera mounted on it is probably fine.

Considerations include how much you're willing to spend; return on investment; what you will use it for; and the amount of time you are willing to devote to learn how to use it, as there is more to it than just sending it up to take pictures and video. ■

NEW TIGHT-TAIL-SWING MODEL

Komatsu's PC78US-10 increases productivity in limited-space applications

Even on congested jobsites, you expect outstanding productivity. Komatsu's new PC78US-10 hydraulic excavator delivers with a tight-tail-swing radius, offset boom and contoured cab design that allows operators to work with ease in confined spaces.

The PC78US-10 increases productivity up to 3 percent compared to the Dash-8 model it replaced. At the same time, it lowers fuel usage up to 5 percent with no loss of performance, thanks to a Tier 4 Final engine that provides an additional 10 horsepower more than its predecessor. The result is time and cost savings, which are further reduced because the PC78US-10's engine requires no diesel particulate filter or diesel exhaust fluid (DEF).

"The PC78US-10 uses a Komatsu Diesel Oxidation Catalyst after-treatment system that is designed specifically to provide 100 percent passive regeneration," said Kurt Moncini, Komatsu Product Manager, Excavators. "The fact that the PC78US-10 has no diesel particulate filter and uses no DEF really sets it apart. It helps reduce owning and operating costs, and puts more profit back in our customers' pockets."

New cab design

A new cab design comes with several standard features, including ROPS and OPG Level 1 certification with a reinforced framework; high-resolution LCD screen with ecology-guidance data; rearview monitoring system with camera; a secondary shutdown switch; and in-cab-monitor control of up to 10 attachments. Other operator-friendly enhancements include a new side-by-side radiator and oil cooler to simplify cleaning, and placing all major maintenance items in

areas that are accessible from the ground level. These include the engine hood, right-side hood and side-service doors.

"This is the ideal machine for anyone working on urban, utility contracting or homebuilding worksites," said Moncini. "Between the extra horsepower and generous use of boom-area castings, operators should feel confident when trenching, clearing and working on site development projects." ■



Kurt Moncini,
Komatsu Product
Manager, Excavators

Komatsu's new tight-tail-swing PC78US-10 increases productivity up to 3 percent compared to the Dash-8 model it replaces. It also lowers fuel usage up to 5 percent with no loss of performance, resulting in time and cost savings.

Quick Specs on Komatsu's PC78US-10 Excavator

Model	Net Horsepower	Operating Weight	Bucket Capacity
PC78US-10	65 hp	17,747 lbs	0.37 cu yds



Discover more



IMPROVED EXCAVATION

New PC210LC-11 features better lift capacity, increased fuel efficiency



Discover more

More and less. Both words fit when describing Komatsu’s new Tier 4 Final PC210LC-11 excavator. More describes horsepower and operating weight. The PC210LC-11 provides up to an additional seven horsepower compared to its predecessor. It also has an increased operating weight thanks in part to a standard heavy counterweight that provides improved lift capacity. Those features contribute to the PC210LC-11’s ability to maintain or improve performance and productivity, depending on application.

Less comes in the form of fuel, noise and time. The PC210LC-11 uses up to 6-percent-less fuel than the previous model. Noise levels are lower thanks to a new viscous fan clutch that also improves cooling system efficiency. The wide, spacious ROPS and OPG Level 1-certified cab has design upgrades that reduce noise by two decibels, making the cab one of the quietest in its class. Three travel speeds also help eliminate time lost moving around the jobsite.

“If you need a machine capable of doing many things well – for example, going from loading trucks, to excavating trenches, to placing pipe and back again – this is the excavator for you,” said Kurt Moncini, Komatsu Product Manager, Excavators. “For versatility and long-term value, the PC210LC-11 is tough to beat.”

Added features, improvements

The PC210LC-11 features six work modes to match engine speed and pump flow to various attachments, as well as Komatsu’s Closed-Center Load Sensing System that provides quick response and smooth operation to maximize productivity. Also standard is KOMTRAX Level 5 technology. This feature gives the operator machine data such as fuel and diesel exhaust fluid (DEF) levels, Komatsu Diesel Particulate Filter (KDPF) regeneration status, location, cautions and maintenance information, all on an updated 7-inch LCD monitor. A split-display mode provides information as well as a rear-camera view. Other upgrades include a standard pattern-change valve, to easily switch joystick patterns to accommodate specific operator preferences, and centralized engine checkpoints that provide easy access to engine oil, filters and drain valves.

“As with other Tier 4 Final construction-size machines that are purchased, leased or rented, it’s covered by Komatsu CARE for the first three years or 2,000 hours. It also covers two KDPF exchanges and DEF tank flushes in the first five years,” said Moncini. “We encourage individuals looking for a new 50,000-pound-category machine to contact their distributor to find out more about how the PC210LC-11 can be a great addition to their fleet.” ■

Quick Specs on Komatsu’s PC210LC-11 Excavator

Model	Net Horsepower	Operating Weight	Bucket Capacity
PC210LC-11	165 hp	51,397-53,882 lbs	0.66-1.57 cu yds

Komatsu’s new PC210LC-11 features up to an additional seven horsepower and increased operating weight compared to its predecessor. It also has increased fuel efficiency and additional features that reduce noise and help increase productivity.





PC210LC-11

MORE POWER WITH BETTER FUEL ECONOMY

- 165 hp with up to 6% better fuel consumption*
- KOMTRAX® equipped for system monitoring
- Komatsu Auto Idle Shutdown feature
- Enhanced working modes



I AM KOMATSU

JEFF MARTIN / PAINTER / CHATTANOOGA, TN

"I've worked for Komatsu for over two decades. My team loves to get feedback from Komatsu owners and operators and hear how satisfied they are. That motivates us every day to take extra pride in the meticulous detailing we put into every product that comes out of Chattanooga. The PC210LC-11 is one of my favorite works of art. And that's why I AM KOMATSU."

MADE WITH PASSION AND PRIDE

KOMATSU®

komatsuamerica.com

*Compared to previous Komatsu model.

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PC240LC-11

TIER 4 FINAL HYDRAULIC EXCAVATOR

- New higher performance 177 HP engine*
- More efficient through lower fuel costs*
- Larger LCD color monitor panel*
- Wide access service doors



I AM KOMATSU

MICHAEL THOMAS / WELDER / CHATTANOOGA, TN

"Komatsu excavators come with the latest in technology. I'm proud to be part of the production team that builds them to hold up to years of daily punishment. I make sure they're as rugged as Komatsu's quality reputation, because it's not just Komatsu's reputation on the line—it's mine and all my friends' too. And that's why I AM KOMATSU."

MADE WITH PASSION AND PRIDE

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*Compared to previous Komatsu model.

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GREATER INTELLIGENCE

Komatsu introduces its first *intelligent* Machine Control construction/quarry dozer

Komatsu’s *intelligent* Machine Control (iMC) jumped into a new class when it introduced the D155AXi-8, the first construction/quarry dozer that features automated operation from heavy dozing to fine grading. Similar to other iMC dozers, the D155AXi-8 senses and controls blade load to optimize the start of a cut and minimize track slip, resulting in up to 8-percent-greater efficiency compared to typical aftermarket systems.

“When Komatsu introduced iMC dozers, the focus was on mid-size and smaller dozers often used on residential and commercial projects,” said Jason Anetsberger, Komatsu Product Manager, Intelligent Machine Control. “The automated and integrated system has proven to make operators of all skill levels more productive and efficient, leading to a better bottom line. Contributing to the cost savings is eliminating the process of installing and removing masts and cables, so that time can be better spent in moving more material.”

The lack of blade-mounted sensors also means there’s no need for an operator to climb on the blade to install or remove antennas, no coiled cables to snag and no electrical connections to worry about at the start and end of every shift.

Reduced fuel consumption

The D155AXi-8 has an automatic gearshift transmission and lock-up torque converter that work together to select the optimal gear range, depending on jobsite conditions and load, and are designed to maximize operational efficiency. The electronically controlled transmission locks up the torque converter to transfer engine power directly to the transmission, eliminating horsepower

loss and cutting fuel consumption by up to 10 percent.

It features Komatsu’s patented SIGMADOZER blade, which is designed to dig and roll more soil at the blade’s center, hold more material, reduce digging resistance and doze up to 15-percent-more material while using less power compared to a typical Semi-U blade.

“The D155AXi-8 is ideal for highway construction and large residential or commercial site-prep projects,” said Anetsberger. “It shares many of the same great features of our standard and popular D155, with the added iMC technology. If you’re looking for something that accurately and efficiently moves massive amounts of material, look no further.” ■



Jason Anetsberger, Komatsu Product Manager, Intelligent Machine Control

Komatsu’s D155AXi-8 dozer brings *intelligent* Machine Control to its construction/quarry size machines. It is ideal for highway construction and large residential or commercial site-prep projects.

Quick Specs on Komatsu’s D155AXi-8 Construction/Quarry Dozer

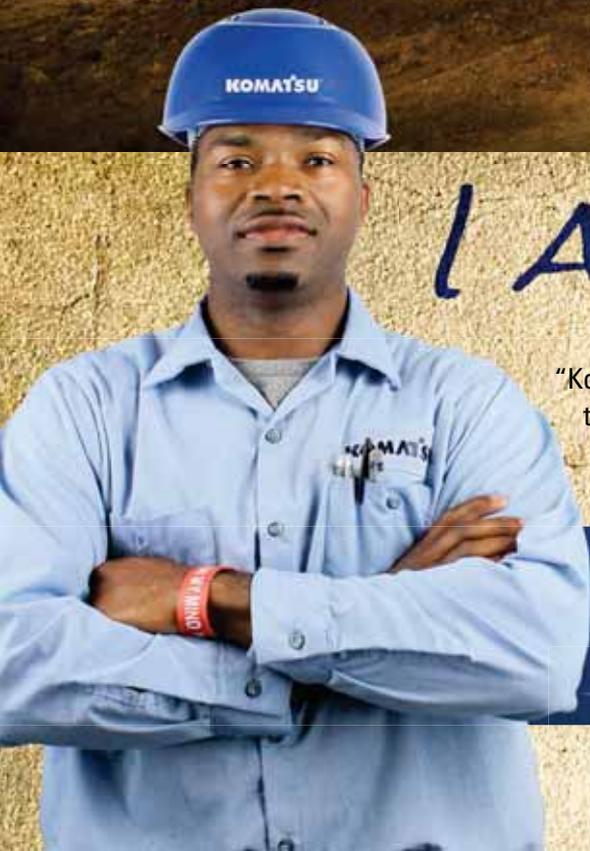
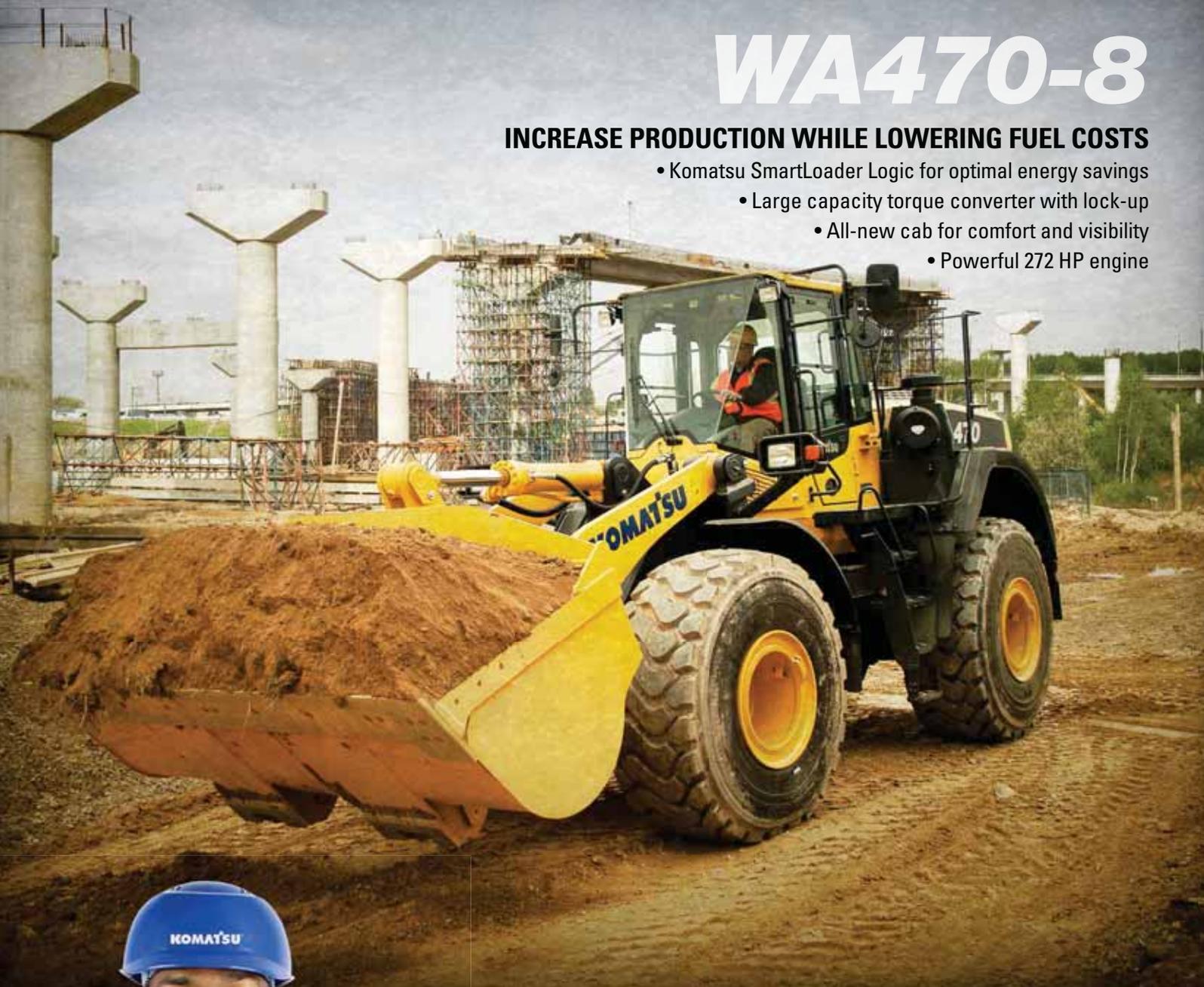
Model	Net Horsepower	Operating Weight	Bucket Capacity
D155AXi-8	354 hp	90,610 lbs	12.3 cu yds



WA470-8

INCREASE PRODUCTION WHILE LOWERING FUEL COSTS

- Komatsu SmartLoader Logic for optimal energy savings
- Large capacity torque converter with lock-up
- All-new cab for comfort and visibility
- Powerful 272 HP engine



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006

NEW ARTICULATED TRUCK

Komatsu's HM400-5 delivers high production with Tier 4 Final engine that optimizes performance

The goal of moving materials is to do it as productively and efficiently as possible. Komatsu's new HM400-5 articulated dump truck provides what you need with high levels of performance and minimal operating costs. It includes a low 10-foot, 5-inch loading height, 70-degree dump angle and selectable working modes that allow operators to match its performance to the application or conditions.

The HM400-5 maintains the productivity and performance of the previous Dash-3 model, with a new Tier 4 Final engine to deliver its 44.1-ton payload. The Komatsu-designed engine uses an advanced electronic-control system to manage airflow rate, fuel injection, combustion parameters and aftertreatment functions to optimize performance.

"With its low loading height, the HM400-5 matches well with 40- to 60-ton hydraulic excavators and 5.5- to 7.5-cubic-yard wheel loaders," said Joe Sollitt, Komatsu Product Marketing Manager. "It's ideal for a variety of applications, including site prep and large-scale material processing operations with challenging haul profiles. Even in less-than-ideal conditions, it delivers great fuel economy and outstanding production."

Standard Payload Meter

Komatsu's Traction Control System automatically provides optimum traction when operating in soft ground conditions. If conditions worsen and the HM400-5 detects tire slippage, the inter-axle-lock kicks in. If tire slippage continues, four independent brakes are automatically applied to the slipping wheels to regain traction.

Owners and operators can keep track of production with a standard, integrated Payload Meter that displays loaded-material weight on an LCD monitor inside the cab. A pair of external lamps illuminate green, yellow or red as the payload increases through three different ranges to help prevent under- and over-loaded haul cycles. Data is stored on board and is accessible by plugging a laptop into a port in the truck or remotely via KOMTRAX.

"Users can monitor daily, weekly or monthly production with very detailed data to allow for full production studies," said Sollitt. "We made service more convenient with a lightweight, fiberglass engine hood and a cab that tilts rearward for easy access to the transmission and hydraulics. The HM400-5 is a great fit for anyone looking to move mass amounts of material with lower costs in mind." ■



Joe Sollitt,
Komatsu Product
Marketing
Manager



Discover more

Komatsu's new Tier 4 Final HM400-5 articulated dump truck has a 44.1-ton-payload capacity and matches well with 40- to 60-ton excavators and 5.5- to 7.5-cubic-yard wheel loaders. It features a new standard Payload Meter and easier serviceability.

Quick Specs on Komatsu's HM400-5 Articulated Dump Truck

Model	Net Horsepower	Max Gross Vehicle Weight	Payload
HM400-5	466 hp	165,644 lbs	44.1 tons



FINDING ANSWERS FAST

Komatsu's Kwick Tips videos put valuable machine information at your fingertips



Craig McGinnis,
Komatsu Product
Marketing Manager



Discover more

How do I get the most out of my equipment, and what features allow me to do that? Those are questions you probably ask yourself often. Komatsu is making it easier and faster to get answers to those and more with its Web-based Kwick Tips videos.

"People use the Web to immediately access all kinds of information, such as recipes or how to change parts on their cars," said Komatsu Product Marketing Manager Craig McGinnis. "These Kwick Tips videos are just like that. For instance, the equipment owners or operators may want a refresher on how a particular button or feature, such as traction control, affects their productivity and efficiency. The videos are a way for them to quickly get answers, and they can do that from anywhere

they have an Internet connection. It could even be while sitting in the cab of the machine using a smart phone or tablet."

Users have multiple avenues to access the videos from Komatsu America's website, www.komatsuamerica.com. At the top of the home page is an icon for YouTube. Clicking on that will take you directly to the Komatsu YouTube channel where you can search for all the Kwick Tips videos, as well as some more in-depth Komatsu training videos on topics such as Tier 4 Final and diesel exhaust fluid.

Another way to access the videos is to use the search box on Komatsu's website to find a specific machine. When the page for that machine pops up, click on the Watch Our Videos tab, which will show a drop-down menu of topics. Click the one that interests you to see the video. If you are looking for a particular machine, you can also click on the equipment tab on the home page and continue to follow the tabs until you get to the model you are looking for.

Positive feedback

McGinnis noted that the launch of Kwick Tips was well-received by users, as early traffic to the videos was encouraging. "The video series trained almost 1,500 viewers the first few months of availability. That's a good foundation to build on.

"Kwick Tips are short and to-the-point," added McGinnis. "We're constantly adding more. The main focus as we started was wheel loaders. We continue to expand on those, and we're also producing videos for our motor graders, excavators and other products. We envision having a very comprehensive list in the near future." ■

Komatsu's Kwick Tips videos provide valuable insight into machine functions and features that can potentially increase production and efficiency. The videos can be accessed anytime at www.komatsuamerica.com, or by searching for Kwick Tips on Komatsu's YouTube channel.



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PAVING IN LESS TIME

Wirtgen's AutoPilot stringless system makes slipform projects with its SP 15 machines even more efficient

When it comes to versatility on paving monolithic profiles, Wirtgen set the standard with slipform pavers such as its SP 15 and Tier 4 Interim SP 15i models. They are true multipurpose machines that lay curb and gutter, barrier, sidewalk, V-ditch, special applications and slabs. Both can be quickly configured on-site for left- or right-side pouring, have maximum paving widths of 6 feet, and maximum barrier/parapet placement height of 4 feet 3 inches.

Wirtgen's new AutoPilot stringless paving system for poured-in-place concrete profiles – designed exclusively for its slipform pavers – has helped make those standard-bearers even more efficient. AutoPilot is a GPS-based system that ensures the highest precision and optimum efficiency, regardless of whether the job calls for straight profiles or highly complex curved paths.

“The system creates a virtual stringline, and the machine runs off that,” explained Erik Smydra, Stringless Machine Control Specialist with Wirtgen America. “There are no trip points or strings to knock down or pins to set. Users can either import shapes from a CAD file or use a field rover to shoot hubs and input the data. The machine starts paving from there.”

Intuitive operation, increased production

Wirtgen's proprietary AutoPilot control system gives construction companies a distinct competitive edge, because it bypasses the need to establish a digital terrain model. Programming is completed with a rover pole to capture coordinates or by simply using the jobsite plans, eliminating the need for a surveyor.

The system uses a computer that is integrated into the machine, as well as a control panel that allows intuitive operation. For course control, two machine-mounted GPS receivers communicate with an additional GPS reference station positioned on-site. For precise grade control, a laser, ultrasonic sensor or total station is used.

“It saves a significant amount of time because a crew doesn't have to come to the jobsite ahead of time to set pins and lines,” said Smydra. “That makes paving any job faster and more efficient, and it especially pays for itself on tight radii with the elimination of setting all the pins necessary for those pours. Theoretically, you could shoot hubs in the morning, import the files and be paving the same day – increasing the number of feet poured compared to traditional methods.” ■



Erik Smydra,
Stringless Machine
Control Specialist,
Wirtgen America



Discover more

Wirtgen's SP 15 slipform paver with a GPS-based AutoPilot stringless paving system for poured-in-place concrete profiles ensures the highest precision and optimum efficiency on any job. The system bypasses the need to establish a digital terrain model.



FUNDING ASSESSMENT

DOT auditing state-highway spending amid push to pass new legislation

The Department of Transportation recently announced it is launching an audit of state-highway spending. The agency's inspector general said the review is intended to make sure federal funding that's allocated to states is being properly used, noting that the Federal Highway Administration's (FHWA) State Transportation Improvement Program (STIP) provides more than \$37 billion annually for road and bridge construction.

"The objective of this audit is to assess FHWA policies and procedures and to ensure STIPs receive comprehensive, consistent reviews and meet federal requirements, including coordination with the Federal Transit Administration," according to officials with the inspector general's office.

Auditing the states comes at a time when many are pushing to renew and increase transportation funding. The previous highway

bill expired nearly a year ago, and Congress has passed short-term patches since. Even with bills in place, funding has fallen short of meeting needs. The current gas tax has not been raised in more than 20 years, and more fuel-efficient cars have led to decreased revenues.

Groups push for solutions

The funding shortfall has put many of the country's roads and bridges in serious disrepair. An American Road & Transportation Builders Association (ARTBA) review of the 2014 U.S. Department of Transportation National Bridge Inventory database showed that more than 61,000 bridges are classified as structurally deficient. Those bridges are crossed 215 million times per day, and data shows a current backlog of more than \$115 billion in bridge and \$755 billion in highway work.

"State and local governments are doing the best they can to address these significant challenges, given limited resources," said ARTBA Chief Economist Dr. Alison Premo Black. "Many of the most heavily traveled bridges are nearly 50 years old. Elected officials can't just sprinkle fairy dust on America's bridge problem and wish it away. It will take a committed investment by legislators at all levels of government."

An Associated General Contractors of America (AGC) campaign known as #DriveBetterRoads highlights the benefits of fixing transportation infrastructure, such as reduced commute times.

"Drivers don't have to settle for bad roads, lousy traffic and unsafe bridges," said AGC member Dale Stubblefield during an organization event to announce the initiative. "As long as drivers speak up, we can all 'drive better roads.'" ■

The Department of Transportation says it is auditing state-highway spending. The agency's inspector general said the review is intended to make sure federal funding that's allocated to states is being properly used. Industry groups are calling for more surface transportation funding.



STAY ALERT

AGC urges motorists to proceed with caution in highway work zones

Forty-six percent of highway contractors reported that motor vehicles had crashed into their construction work zones during the past year, according to the results of a new highway work-zone study conducted by the Associated General Contractors of America (AGC). Association officials urged summer-travel motorists to stay alert while driving through work zones, noting that drivers and passengers are more likely than highway workers to be hurt or killed in work-zone accidents.

“If the thought of saving someone else’s life isn’t enough to get you to slow down, just remember that you and your passengers are more likely to suffer in a highway work-zone crash than anyone else,” said Tom Foss, President of Brea, California,-based Griffith Company and the Chairman of AGC’s Highway and Transportation Division. “In most work zones, there just isn’t enough margin for error for anyone to speed through or lose focus.”

Foss said that 41 percent of contractors reported that motor vehicle operators or passengers were injured during work-zone crashes this past year, and 16 percent of those crashes involved a driver or passenger fatality. Highway work-zone crashes also pose a significant risk for construction workers, Foss noted. He said 16 percent of work-zone crashes injure construction workers, and 9 percent of those crashes kill them.

Work-zone crashes also have a pronounced impact on construction schedules and costs, Foss said. He noted that 26 percent of contractors reported that work-zone crashes during the past year have forced them to temporarily shut down construction activity. Those delays were often lengthy, as 48 percent of those project shutdowns lasted two or more days.

Tougher penalties would help

Association officials said that 69 percent of contractors nationwide feel that tougher laws, fines and legal penalties for moving violations in work zones would reduce injuries and fatalities. In addition, 80 percent of contractors said that an increased use of concrete barriers will help reduce injuries and fatalities. Additionally, 70 percent of contractors nationwide agree that more frequent safety training for workers could help. They added that many firms and associations have crafted these types of highway safety programs.

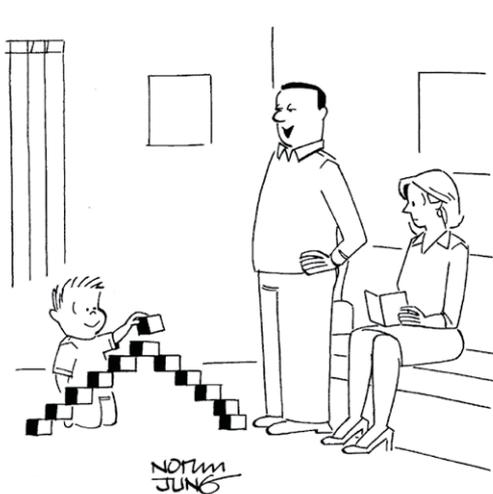
Foss suggested that the best way to improve safety is for motorists to be more careful while driving through highway work zones. “Our message to every motorist is this: When you see construction signs and orange barrels, take your foot off the gas, put the phone down and keep your eyes on the road.” ■

This article is based on a press release from Associated General Contractors of America (AGC).

Forty-six percent of contractors reported that motor vehicles crashed into their construction work zones during the past year. AGC is urging motorists to stay alert and obey posted signs.



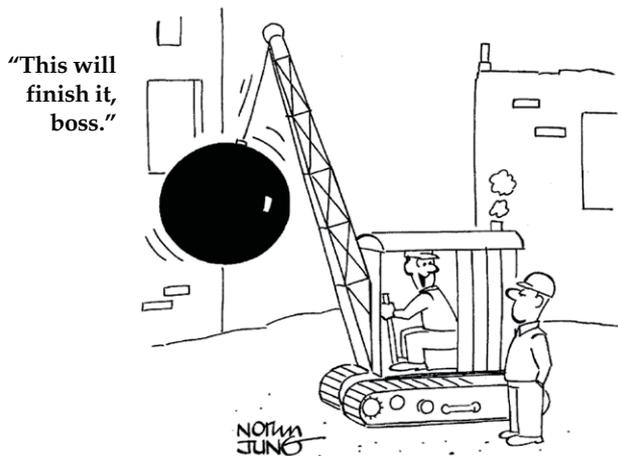
On the light side



"He definitely has a talent in construction."



"My parents are old-fashioned. We can't have social media at the dinner table. We're expected to actually talk."



"This will finish it, boss."

Did you know...

- The letter J does not appear anywhere on the periodic table of the elements.
- The ocean is home to nine out of every 10 living things.
- The tooth is the only part of the human body that cannot heal itself.
- The University of Alaska spans four time zones.
- Avocados have the highest calories of any fruit, at 167 per hundred grams.
- Warner Communications paid \$28 million to copyright the song "Happy Birthday."
- The roar we hear when we place a seashell next to our ear is not the ocean, but rather the sound of blood surging through the veins in the ear.
- In ancient times, strangers shook hands to show that they were unarmed.
- Everything weighs 1-percent less at the equator.
- A 1,200-pound horse eats about seven times it's own weight each year.

Brain Teasers

Unscramble the letters to reveal some common construction-related words. Answers can be found in the online edition of the magazine at www.TheLinderLink.com

1. M P U D _ _ _ _ _
2. K T C R U _ _ _ _ _ K
3. G R E Y N E _ _ N _ _ _ _ _
4. C R T A R O T _ _ R _ _ _ _ _ R
5. R T A L I E M A _ _ A _ _ E _ _ _ A _ _

Poll: More than 70 percent support 10-cent gas-tax increase

A Mineta Transportation Institute poll showed 71 percent of voters would support a 10-cent increase in the federal gas tax if the money was used specifically for transportation improvements. There was also strong support if the increase was spent on projects to reduce accidents and improve safety, as well as for projects to add modern, technological systems.

The federal gas tax has been the traditional source of funding for roads and bridges since the 1930s and was last increased in 1993. Because it didn't keep up with inflation – and cars are more efficient – a gap in transportation

funding was created. Congress typically spends about \$50 billion annually on transportation, but the gas tax only brings in approximately \$34 billion.

“Conventional wisdom says that Americans strongly oppose any increase in the federal gas tax,” said Dr. Asha Weinstein Agrawal, the study’s director. “However, this survey shows that significant majorities want the government to provide better transportation infrastructure, are willing to pay for improvements, and want gas-tax revenue spent on public transportation, as well as on roads and highways.” ■



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Komatsu announces equity participation in technology firm

Komatsu recently announced its equity partnership in ZMP, Inc. The companies will work together to automate construction and mining equipment, as well as other areas. Komatsu will continue to develop construction equipment and next-generation mining machinery by applying information and communication technologies while collaborating with other companies for innovation.

ZMP has advanced technological expertise in image recognition and in sensing and controls for vehicle automation systems. It has received outstanding evaluations from the automobile industry, as well as from other industries.

Prior to equity participation, Komatsu was collaborating with ZMP to develop control technology for mining equipment. Komatsu expects to further strengthen collaboration in unmanned operation of equipment, vehicle automation and other fields.

“Komatsu will be able to accelerate the pace of providing products and services that are designed to innovate customers’ jobsites, and ZMP will be able to expand its business domains and can expect further growth,” Komatsu noted in a press release announcing the equity participation. “Komatsu believes that the two should be able to develop and enjoy a win-win relationship.” ■

2015 World of Asphalt, AGG1 sets records

World of Asphalt and AGG1 broke records for attendance, number of exhibitors, show space and education tickets during the March 2015 event held in Baltimore, Md. Attendance totaled more than 7,600, and 450 exhibitors showcased the latest technologies and products in more than 135,000 square feet of space. More than 10,000 education tickets were purchased.

“Exhibitors and attendees alike cited the value of face-to-face dialog with so many industry professionals and companies in one place and the consistently high-quality environment of the shows,” said Show Manager Rich Prausa of the Association of Equipment Manufacturers.

The 2016 World of Asphalt and AGG1 is to be held March 22-24 in Nashville at the Music City Center. ■

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2003 KOMATSU WA320-3MC	E00036674	A31936	12,773	\$39,000
2005 KOMATSU WA500-3LK	E00037024	A72331	19,931	\$80,000
2006 KOMATSU WA500-3A	E00037025	52419	19,423	\$85,000
2008 KOMATSU WA70-5	E00035844	H51507	2,821	\$41,500
2012 KOMATSU WA470-6	E00036453	A46145	12,612	\$125,000



2011 D39PX-22, S/N 3534, 2,896 hrs., OROPS, PAT blade, Komatsu Certified C – \$72,500

PAVING/COMPACTION				
2006 HAMM 3307 SINGLE DRUM SMOOTH ROLLER	E00035600	H1590760	1,912	\$51,500
2009 HAMM HD+120VHF VIBRATORY ROLLER	E00036565	H1840066	7,191	\$41,500



2009 PC160LC-7EO, S/N C10086, 2,698 hrs., A/C, 8'6" stick, 36" bucket, 24" shoes, aux. hyd., Komatsu Certified B – \$105,000

EXCAVATORS				
1996 KOMATSU PC220LC-6LC	E00035913	A82214	7,563	\$25,000
2009 KOMATSU PC160LC-7EO 	E00036140	C10086	2,698	\$105,000
2012 KOMATSU PC160LC-8 	E00036262	25572	1,842	\$131,500
2013 KOMATSU PC360LC-10	E00036946	A32491	3,401	CALL



2008 WA70-5, S/N H51501, 2,821 hrs., FSO, cab/heat, Q/C, bucket and forks – \$41,500

DOZERS				
2011 KOMATSU D39PX-22 	E00036458	3534	2,896	\$72,500
2013 KOMATSU D39PX-23 	E00036325	90115	3,192	CALL

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