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#### A Message from Brandeis Machinery



**David Coultas** 

### **BRANDEIS**

#### **Dear Valued Customer:**

It's no secret that our nation's infrastructure needs to be updated. There appears to be growing optimism, and even confidence, that real support for this will happen. Congress continues to work on plans that will hopefully be passed sooner rather than later. Long-term legislation is in the works to replace the current Fixing America's Surface Transportation (FAST) Act that expires at the end of September.

That could be a boon for the construction industry. There would be a significant increase in the need for aggregate products, concrete and earthwork. If you service any of those or related industries, we have the equipment you need to get your job done more productively and efficiently.

That equipment includes the latest dozers, such as Komatsu's new D71-24 base and intelligent Machine Control (iMC) 2.0 D71i-24 models. Previewed at CONEXPO last year, they were introduced to rave reviews. Advanced technology in the iMC models allows operators to run in automatics from grass to grade. This saves time, labor, surveying and staking. As one Komatsu product manager said, "They are equally adept at precise, high-speed grading and rough dozing."

If you are working in tight quarters, such as a lane of traffic or against a building, a compact excavator is a great choice. Check out the new PC88MR-11 which has several updated features that increase productivity and efficiency – including a swing boom that moves independently of the cab. This allows operators to get right next to what needs to be dug without worrying about the counterweight swinging into something.

There are also product support articles that I think you will find valuable, including one on why Supercoolant is a great choice for your machines.

As always, if there's anything we can do for you, please call one of our branch locations.

Sincerely,

Brandeis Machinery & Supply Company

David Coultas

David Coultas President

Hope for an infrastructure boom?



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## MARK Energy, LLC takes on contour auger mining operation and reclamation process in the hills of eastern Kentucky



Kenny Spangler, President of MARK Energy, LLC

At MARK Energy's auger operation in eastern Kentucky, an operator uses a Komatsu HM400-5 articulated truck to dump a load of material next to a Komatsu D155AX-8 dozer, which will push

After graduating from high school in 1995, Kenny Spangler began mining coal in the hills of eastern Kentucky near Whitesburg. For the next two decades, Spangler gained an in-depth knowledge of how to run a coal mining operation. In 2019, Spangler founded his own coal mining company, MARK Energy, which is named after his family: Mandy, Amelia, Reagan and Kenny, himself. The firm runs a contour strip and auger operation to mine metallurgical coal. After removing the coal, the product is shipped domestically and globally where it is mainly used to produce steel.

"I started running a piece of equipment for a coal mining company on the same property where MARK Energy is currently based," noted Spangler. "I eventually worked my way up through the ranks and was promoted to President of the western division. After the company went bankrupt, I partnered with an engineer to do a reserves study on the mountain, and we decided to lease the property to start our own mining operation. We both had 15 years of experience working the mountain, which gave us a lot of knowledge about where the coal reserves would be

located," continued Spangler. "We knew the corridor running through the mountain, the thickness of the seams and where the seams were located. It was a matter of acquiring the proper permitting, equipment and people, because we both knew this would be a profitable operation."

With 11 employees, Spangler has a small but structured operation. "All of our employees are family or people I've worked with previously," stated Spangler. "That allows us to run a tight-knit and efficient operation. We've got 6 to 7 million tons of reserves under lease and will likely have more if we can stay the same size."

#### **Accessing the coal**

Spangler succinctly explained the process of accessing and mining the coal: "Once we've identified an area with coal, we blast the rock, strip the coal and create a contour. We follow up behind ourselves with an auger to extract 200 to 300 additional feet of coal. After we auger the material, we begin the reclamation process that will leave the mountainside the same — or better — than the way we found it."

Spangler continued, "When we began mining here, the existing walls from previous mining operations were 100 to 150 feet tall. We're able to access additional coal along those walls and then replace them to a natural slope as we go. We grade the slopes, add dirt and seed it so that in a couple of years, anybody hiking through this area won't notice that it was once a mining site."

To access the coal, MARK Energy shoots 120,000 to 150,000 yards of rock per month, which yields 8,000 to 10,000 tons of coal. On a daily basis, the firm moves 5,000 to 6,000 yards of material. To handle the heavy workload it relies on a fleet of Komatsu equipment, including a WA500-8 wheel loader, a WA600-8 wheel loader, three HM400-5 articulated trucks, a PC490LC-11 excavator and two D155AX-8 dozers.

"We handle a lot of hard rock here and need machines that can keep up with the rigor of the environment," said Spangler. "Cycle times and efficiency are an important part of our operation, and the WA600 and HM400 work





After blasting, an operator pushes rock off a shelf using a Komatsu D155AX-8 dozer, where another operator uses a Komatsu WA600-8 wheel loader to place the material into the bed of a Komatsu HM400-5 articulated truck. MARK Energy President Kenny Spangler said, "Cycle times and efficiency are an important part of our operation, and the WA600 and HM400 work well together to make sure we always have a truck to load and a machine that can load them quickly. The WA600 is powerful and a great fit for our operation. Both of our dozers have great power as well and can push the material without slipping."

well together to make sure we always have a truck to load and a machine that can load them quickly. The WA600 is powerful and a great fit for our operation.

"We use the 490 to scrape along the contour, build ponds, and fill in for the 600 when it's getting an oil change," continued Spangler. "It's got a large bucket on it that allows us to use it for production without missing a beat. Both of our dozers also have great power and can push the material without slipping."

#### **Building relationships**

When looking for the right equipment for its operation, Spangler took his employees on a trip to the Komatsu Customer Care Center in Cartersville, Ga., with Brandeis Machinery & Supply Company Sales Rep Justin Richardson. The MARK Energy team spent the day operating various pieces of Komatsu equipment to see how they performed.

"Justin originally tried to get the equipment out to the job site, so we could demo it on the mountain," explained Spangler. "Once he realized every piece of equipment we wanted to use at our operation was available to demo in Cartersville, we set up a trip to go there. We didn't have any knowledge of the equipment beforehand, and after spending a day working with the machines and getting to know Justin,



An operator uses a Komatsu WA600-8 wheel loader to place rock into the bed of a Komatsu HM400-5 articulated truck at MARK Energy's contour auger mining operation.

we were sold on the machines' capabilities and the support we would receive from Justin, Komatsu and Brandeis Machinery.



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### 'We can trust them to put our interests first'

... continued



When looking for the right machines for its contour mining operation, MARK Energy President Kenny Spangler (left) partnered with Brandeis Machinery & Supply Company Sales Rep Justin Richardson. "Once (Justin) realized every piece of equipment we wanted to use at our operation was available to demo in Cartersville, Ga., we set up a trip to go there," said Spangler. "We didn't have any knowledge of the equipment beforehand, and after spending a day working with the machines and getting to know Justin, we were sold on the machines' capabilities and the support we would receive from Justin, Komatsu and Brandeis Machinery."

"We decided to exclusively add Komatsu equipment because of the relationship we built with Brandeis Machinery," continued Spangler. "I feel like we can trust them to put our interests first in any situation. If we ever need anything, they've been quick to answer the phone and help us move forward."

Spangler also appreciates the Komatsu Care coverage on the machines, which provides complimentary factory scheduled maintenance from a Brandeis Machinery technician for the first two years or 3,000 machine hours on most Tier 4 Final equipment. "Komatsu Care has been great because the technician will meet us at the job site on our schedule and take care of everything," said Spangler. "We plan to extend the program past the initial 3,000 hours because it has been so beneficial to our operation."

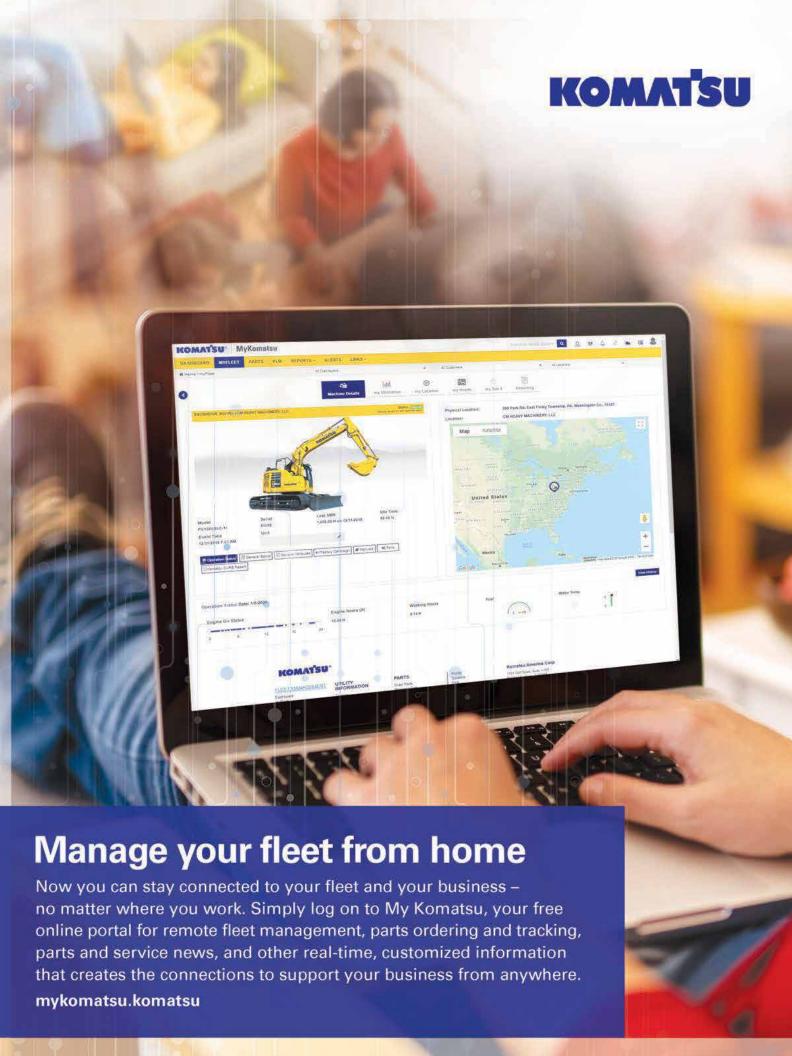
#### Looking ahead

Spangler plans to stay small and continue operations in the same capacity. With plenty of reserves available, MARK Energy is uniquely qualified to access the material and maintain profitability.

"We have two years under permit at our current location," explained Spangler. "We signed another lease for a separate holler and will have an additional 10 to 15 years available there. Our operation is in a good position for the future."

Along the contour, an operator cuts into the mountainside using a Komatsu PC490LC-11 excavator. "We use the 490 to scrape along the contour, build ponds, and fill in for the 600 when it's getting an oil change," said MARK Energy President Kenny Spangler. "It's got a large bucket on it that allows us to use it for production without missing a beat."





# From mining to mass excavation, Lutgring Bros., Inc. offers high-quality services throughout southern Indiana



Bret Lutgring, Owner



Kimberly Arndt, Owner



Grant Lutgring, Owner

The Lutgring family lineage in the mining and construction industry of southern Indiana extends as far back as five generations to the early 1930s, when Andy Lutgring began mining limestone during the Great Depression. In 1955 two of Andy's grandsons, Paul and Charlie, sold their stone quarry and founded Lutgring Bros., Inc. as a general contractor for southern Indiana. Today, the Tell City, Ind., based company is owned by Grant Lutgring, Kimberly Arndt and Bret Lutgring. It focuses on a mix of public and industrial contracts.

"When Paul and Charlie started Lutgring Bros., they did a little bit of everything," said Grant. "They built houses and subdivisions, and installed storm, sewer and water lines. They also traveled a decent amount and completed a lot of INDOT (Indiana Department of Transportation) highway projects."

"The types of projects we take on changes every year," added Kimberly. "In the last five years, we've added quarry stripping capabilities to stay busy when our project load slows down. Typically, though, dirt work comprises a majority of our contracts. We excel at dirt and rock jobs that would scare off other highway contractors and larger industrial projects that require detailed implementation."

(L-R) Owner Kimberly Arndt, Daniel Lutgring, Steven Lutgring, Owner Bret Lutgring and Owner Grant Lutgring meet with Brandeis Machinery & Supply Company Sales Rep Matt Bueltel. "It was a tough decision to walk away from our previous equipment dealer, but Brandeis Machinery has been very good to work with," stated Bret. "They've jumped through hoops to take care of us, and we've been very impressed with them."



No project is too big or too small for Lutgring Bros., Inc. From local \$1,000 projects to \$10 million multi-year job sites, the firm supports its community by providing high-quality finished products for anybody needing its services.

"No matter who we are working for, we always meet our deadline," stated Bret. "Most (projects) are completed ahead of schedule. Our employees are eager to work hard and do things the right way. One of our mantras is, 'When everybody's in the coffee shop, we're out getting work done."

#### **Best comparative performance**

Since a substantial portion of Lutgring Bros., Inc.'s project bids require mass excavation, the firm relies on its excavators to move large amounts of earth quickly and safely. In December 2019, the firm decided to upgrade to a larger excavator. It brought multiple vendors to an active job site where Lutgring Bros., Inc. operators compared the capabilities of each machine.

"We were at an active job site installing 2,000 feet of a 6-by-6 box culvert," explained Bret. "We wanted to compare how each machine set the boxes and would base our assessment of the machine solely off of that performance. After five of our operators had a chance to test each machine, they unanimously agreed that the Komatsu PC490 excavator performed the best. I've had the opportunity to operate the machine several times and have noticed that it has great stability and is very smooth. Every second counts when you're moving large amounts of material, and its speed impressed me as well. We completed the rest of the project using that excavator and noticed that our cycle times were also slightly faster."

The firm mainly uses the PC490LC-11 excavator to set boxes and mass excavate material into 40-ton haul trucks. At a recent project near its offices, the firm utilized the PC490 excavator to excavate material for a 130,000-yard building pad. The job lasted four months and was completed on time. "Every job we bid is cutthroat, so uptime plays a key role in our success," noted Bret. "The Komatsu excavator has performed well and maximized our productivity."



At a recent project near its offices, Lutgring Bros., Inc. utilized a Komatsu PC490LC-11 to mass excavate material for a 130,000-yard building pad. "Every job we bid is cutthroat, so uptime plays a key role in our success," noted Owner Bret Lutgring. "The Komatsu excavator has performed well and maximized our productivity."

For Bret, safety also plays an important role when finding the right machine. "We always want to make our equipment better for our operators. The excavator has certified rollover protection which is important when we use the machine for stripping. The anti-drift valves on the 490 are also an important feature when we're setting box culverts because it limits the possibility of an accident occurring if a hose were to blow. The operator also has great visibility out of the cab which allows you to see anyone on the job site."

#### **Building a new relationship**

For the previous 30 years, Lutgring Bros., Inc. purchased its excavators almost exclusively from one distributor. When it decided to test out and eventually add the Komatsu PC490LC-11 excavator to its fleet, Lutgring Bros., Inc. worked closely with Brandeis Machinery & Supply Company and Sales Rep Matt Bueltel throughout the process.

"It was a tough decision to walk away from our previous equipment dealer, but Brandeis Machinery has been very good to work with," stated Bret. "They've jumped through hoops to take care of us, and we've been very impressed with them. There was a morning when the excavator threw up an error code at 4:30 a.m., and by 5:30 I had an answer from the service department. They've been an outstanding partner to our business.

"As our sales rep, Matt stands behind his word," continued Bret. "I knew a lot of people that had worked with him before we added the 490, and Matt has lived up to his reputation. He and Brandeis Machinery have done an excellent job taking care of us."

#### Staying flexible

During the summer, Lutgring Bros., Inc. employs up to 60 people for its wide range of projects. The number of employees varies throughout the year, but the firm's strong work ethic and wealth of knowledge remain the same. Looking forward, the firm's goal is to increase its number of employees and projects.

"We want to continue to grow but be wise in the choices we make and how we achieve that growth," noted Kimberly. "We're always looking at opportunities, whether that's in the equipment we buy, the jobs we bid or who we have on staff. Currently, we are set up well to continue our success into the future."





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#### **Guest Opinion**

# Value engineering should empower project teams to optimize designs by examining all functions and their associated costs

Completing construction projects on time and within budget can seem like a daunting task. With additional pressures like fluctuating material costs, skilled labor availability and operational costs, clear and creative planning from the start become even more crucial. This is where value engineering can offer several benefits.

When value engineering is referenced in our industry, our minds may immediately go to a process that reduces project cost by slashing the scope or decreasing the quality of materials used. However, that is not necessarily what the definition should be.

In construction, value engineering empowers project teams to improve value by examining the function of each element and its associated cost. By examining the cost-benefit ratio, integrated design and construction teams can make suggestions for alternate delivery methods, designs or materials that enhance project value.

It's critical to note that boosting the value of projects does not mean reducing costs. It means optimizing project components through an analysis of all factors – cost, upkeep, wear and tear, aesthetic value, etc. To provide truly advantageous value engineering, design and construction teams must first understand the project as a holistic effort. Every project is different, as is every business' definition of value

### Live and breathe entire project life cycle

Value engineering assesses the functionality of a product, good or service in relation to cost. With this service, consideration is provided right from the beginning of the project regarding availability of materials, labor and material costs, construction delivery methods, construction site constraints and more. By evaluating these factors upfront and limiting possible difficulties that could arise during the project, owner expenses may be reduced, and the schedule can be tightened.

In combination with value engineering, the best way to achieve successful results during a project is to have a fully integrated design and construction team that lives and breathes the entire project life cycle. The design, construction and, ultimately, the end user need to be joined together on every decision, from design inception through training and turnover. This allows the team to not only suggest innovations and value propositions during the project, but also to offer solutions for the most efficient yet reliable results for years to come.

Author bio: John Maranowicz oversees design-build projects ranging from major airport expansions to work involving industrial manufacturing, food and consumer products, aerospace, and surface transportation at Burns & McDonnell. He is experienced in every facet of construction management, including preconstruction, estimating, design management, value engineering, scheduling and direct supervision of self-perform projects.

Editor's note: This article is excerpted from a blog by John Maranowicz at Burns & McDonnell. To read the piece in its entirety, visit: https://blog. burnsmcd.com/optimizing-construction-projectswith-value-engineering.



John Maranowicz, Regional Construction/ Design-Build Group Manager, Burns & McDonnell

John Maranowicz, Regional Construction/Design-Build Group Manager with Burns & McDonnell, says, "Value engineering empowers project teams to optimize designs by examining the function of each element and its associated cost. By examining the cost-benefit ratio, integrated design and construction teams can make suggestions for alternate delivery methods, designs or materials that enhance project value."







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# AGC, Fisher Phillips offer guidance to employers about policies related to COVID-19 vaccinations

In February, President Joe Biden said that the United States would have enough COVID-19 vaccines to inoculate 300 million Americans. That would mean everyone in the country could potentially be vaccinated by this summer – which is significant considering the drive to put shots in the population's arms began in late 2020.

The plan to vaccinate Americans includes phasing the shots in with essential frontline workers, such as healthcare professionals, in Phase 1A. Those in the construction industry were slated for Phase 1C, which was expected to begin in late spring of this year.

The Associated General Contractors of America (AGC) and the law firm Fisher Phillips put together a document to help construction employers answer questions with regards to vaccines and their employees. The piece is for informational purposes and should not be considered legal advice or recommendations, according to the organization and attorneys. Here are a few of the highlights.

#### Can we require employees to be vaccinated?

The Equal Employment Opportunity Commission (EEOC) issued updated guidance on this issue in December of 2020. The agency's updated FAQs do not unequivocally state that "employers can require the vaccine." However, it repeatedly answers questions discussing what actions employers can take in response to various circumstances after an employer has mandated the vaccine. This language plainly suggests there are circumstances where employers may require vaccine immunization of their workers without violating the Americans with Disabilities Act (ADA), Title VII, and other federal anti-discrimination laws.

The only scenario explicitly described by the EEOC as a permissible basis to mandate vaccination under the ADA is when a worker poses a "direct threat" to themselves or others by their physical presence in the workplace without being immunized.

Should we require our employees to get a vaccine? AGC takes no position. This is a decision that employers should make based on their particular legal obligations and business needs.

Continued . . .

Editor's note: Information provided here is excerpted from a piece by the Associated General Contractors of America and the law firm Fisher Phillips. The full piece can be accessed at https://www.agc.org/sites/default/files/Galleries/enviro\_members\_file/Vaccine%20QAs.pdf.

We encourage you to visit the site for more comprehensive information.

In February, President Joe Biden said that the United States would have enough COVID-19 vaccines to inoculate 300 million Americans. Those in the construction industry were slated for Phase 1C, which was expected to begin in late spring of this year.



### Employers can and should educate themselves and employees

... continued

One factor to consider is the "general duty" clause of the OSH Act, which requires that employers "shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."

If we decide not to require employees to be vaccinated, how could we best encourage employees to get vaccinated? Employers can and should educate themselves and their employees regarding the benefits and safety of the vaccine, especially compared to the risks of not being vaccinated. They should also explore ways to make it easier for employees to get access to the vaccines, such as providing information about local vaccination providers, arranging for mobile units or clinics at or near job sites, paying for any vaccination costs, and allowing employees to get vaccinated during paid work hours.

### What should employers consider before requiring employees to be vaccinated?

Employers should ensure that they can articulate the reason for the mandate, specifically how the vaccination is job-related and consistent with business necessity. Employers should also ensure that policies fully inform employees of applicable requirement and explain how employees may seek an exemption as an accommodation, based on a

medical condition or a sincerely held religious belief. If an employee seeks an exemption on either or both bases, employers must engage in and document an interactive exchange with the employee to determine whether a reasonable accommodation would enable them to perform their essential job functions without compromising workplace safety.

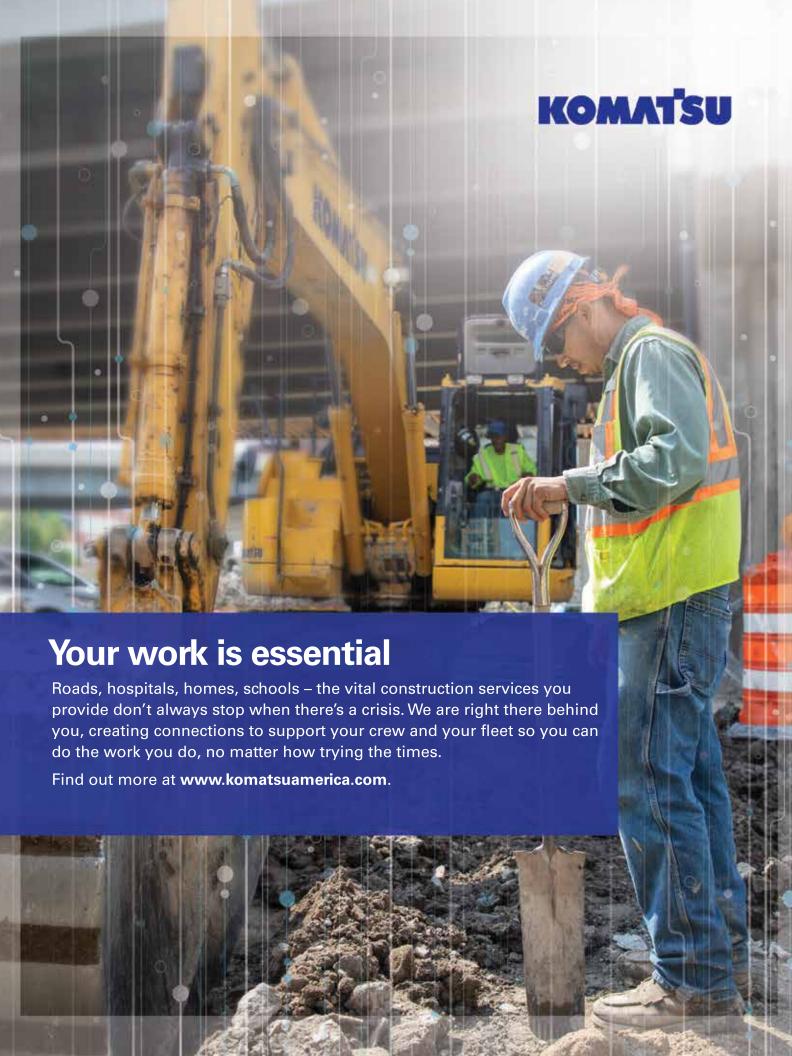
**Are there state and local laws that should be considered?** Yes. Fisher Phillips has a
50-state chart on vaccines, exemptions and related issues.

If we require our employees to be vaccinated, are we liable for any adverse reaction an employee might have from taking the vaccine? Individuals who experience adverse side-effects may assert claims against the manufacturer, the pharmacy or provider who administers it and possibly the employer, depending on the facts. This does not mean the claims would be successful. In most states, workers' compensation is the exclusive remedy for illness or injury acquired at work, in the absence of an intentional action or gross negligence.

Do we have to pay for our employees to get a vaccine? If the employer requires the vaccine, the employer must ensure the employee pays no cost. Further, the most conservative approach would be for the employee to be paid for the time spent getting the vaccine in that scenario. ■

The Associated General Contractors of America and the law firm of Fisher Phillips put together a Q&A for construction employers to give them guidance on employee vaccinations. To view the entire piece, visit https://www.agc.org/sites/default/files/Galleries/enviro\_members\_file/Vaccine%20QAs.pdf.





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# Want a single mid-sized dozer that saves you time, lowers your costs and makes your new operators more effective?

Do bigger jobs always require larger or multiple machines? What if you could get the same amount of work done with a mid-sized dozer that allows you to push large loads while also giving you the ability to get to finish grade? How much savings in time, owning and operating costs would that give you?

"These are considerations you should take into account when approaching every project," said Jon Jennings, Komatsu Product Marketing Manager. "Choosing the right machinery makes a significant difference in production, efficiency and profitability. A single dozer that can push, side cut, finish and work in soft ground gives you a real advantage."

Jennings added that technology such as GPS systems can make the dozer and the operator even more effective at moving dirt productively and efficiently. These systems decrease the time it takes to get to grade, which reduces staking and surveying costs, and virtually eliminate overcutting and the need for expensive fill.

"GPS systems and additional technologies continue to reduce owning and operating costs," stated Jennings. "They are also helping new operators become productive faster. With a shortage of skilled operators, that's a tremendous help."

Manufacturers such as Komatsu are factoring in all of these needs as they design and build new machines, according to Jennings. Komatsu

introduced its first intelligent Machine Control (iMC) dozer with factory-integrated GPS about eight years ago and has developed several new models with additional technology since. This includes their new iMC 2.0 models with added satellite systems to improve satellite coverage – which gives operators the ability to work in more challenging areas, such as near woods or on urban job sites.

#### **New technology features**

The newest iMC 2.0 D71EXi-24, D71PXi-24 and D71PXi-24 Wide dozers combine several features designed to further increase production. Among them are:

 Lift layer control that optimizes earthwork productivity with the press of a button. It maintains compaction quality by automatically controlling lifts to the desired height. Excess fill is eliminated as automatic blade control follows the finished surface once lifts have reached finished grade.



Discover more

Continued...

	Quick Specs							
Model	Net horsepower	Operating weight	Blade capacity*					
D71EX-24	237 hp	49,824 lb	5.8 cu yd					
D71PX-24	237 hp	50,927 lb	6.1 cu yd					
D71 PX-24 Wide	237 hp	52,690 lb	6.6 cu yd					
D71EXi-24	237 hp	50,045 lb	5.8 cu yd					
D71PXi-24	237 hp	51,147 lb	6.1 cu yd					
D71PXi-24 Wide	237 hp	52,911 lb	6.6 cu yd					
* Power angle tilt blade								

The new D71i-24 intelligent Machine Control 2.0 dozers feature the super slant nose design that offers outstanding visibility to the cutting edges. "Seeing the front of the machine with reduced blind spots increases awareness of the job site," said Jon



### **Patent-pending Proactive Dozing Control logic**

... continued

- · Tilt steering control automatically tilts the blade to maintain straight travel during rough dozing and reduces operator steering input by up to 80%.
- Quick surface creation lets operators create a temporary design surface with the press of a button. Combined with other iMC 2.0 functions, crews can begin stripping or spreading using automated input while waiting for the finish grade model.

"The D71i-24s also have our patent-pending Proactive Dozing Control logic that enables even less-experienced operators to cut/ strip automatically from existing terrain," said Jennings. "The dozer measures the terrain while tracking over it and uses that data to plan the next pass, improving productivity by up to 60% compared to previous-generation models. The ability to use automatics from first pass to last, instead of just during finish grading, significantly reduces the time it takes to reach target elevation. Proactive Dozing Control decides on the action of the blade — such as whether to cut and carry material, spread or fill that material or whether it should finish grade."

#### **Better visibility for more efficient grading**

Jennings said visibility plays an important role in operator productivity. Being able to see the

New technology combined with integrated intelligent Machine

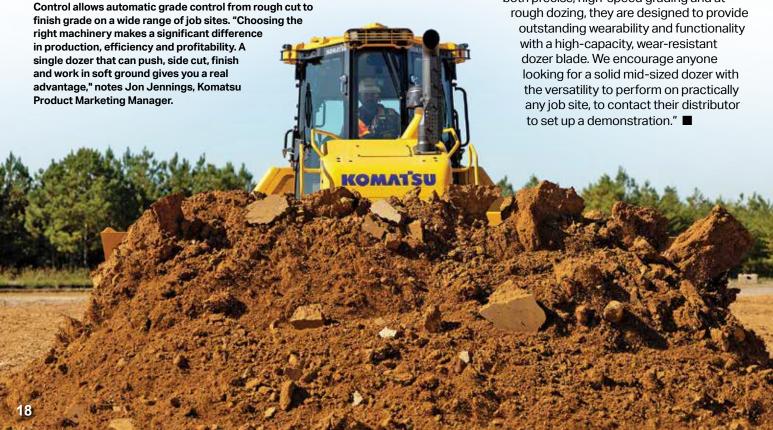
blade's cutting edges increases production, especially during fine grading work near curbs. The D71i-24 is now the largest of Komatsu's hydrostatic dozers, and it maintains the unique super slant nose design.

"Seeing the front of the machine with reduced blind spots increases awareness of the job site," said Jennings. "That's important when running a large machine such as the D71, which has the biggest standard blade in its class size. It increases operator confidence and, in turn, their ability to be more productive."

In addition to the iMC 2.0 D71i-24 models, base D71-24 dozers are also available. EX dozers have a ground pressure of 6.3 psi. With a ground pressure of 5.8 psi, the PX models work well in soft conditions; and for highly sensitive areas, PX Wide models with a ground pressure of 5 psi are available.

"With the D71-24s, we specifically matched the track shoes' width to the blade length to ensure optimal performance," said Jennings. "Additional new performance features include improved steering response and maneuverability. In the new Fast Mode during turns, the outside track speeds up while the inside track slows down."

"From golf course construction to highway projects, the D71-24s are all-around crawler dozers," said Jennings. "Equally adept at both precise, high-speed grading and at outstanding wearability and functionality with a high-capacity, wear-resistant dozer blade. We encourage anyone looking for a solid mid-sized dozer with the versatility to perform on practically any job site, to contact their distributor to set up a demonstration."





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# Are you looking for an excavator that can get close to structures, traffic without the worry of a large counterweight?

Tight job sites present unique challenges. In order to be the most productive in those instances you have to carefully consider the type of equipment to use. For instance, an excavator with a large counterweight could swing into an obstruction or into a lane of traffic.

"Tight-tail-swing and compact excavators continue to gain popularity because they are a great solution for these kinds of sites," said Jonathan Tolomeo, Komatsu Product Manager. "On projects where space is at a premium, such as urban areas or during highway reconstruction where you can only work in a single lane, they deliver outstanding production results in a small package. They are also great for tasks that require you to place the machine very close to a house or other type of building."

Tolomeo added that not all tight-tail-swing and compact excavators are right for every limited-space situation. Take foundation repair for example. He emphasized that the best fit for the job is a machine with a swing boom that can work independently of the cab.

"The operator positions the tracks very close to the structure, then only moves the boom," Tolomeo explained. "This allows for digging at various angles while the cab stays in a fixed position. There is virtually no chance of a counterweight swinging into the house or other building as you dig and pile dirt."

#### Attachments increase versatility

Komatsu recently introduced its latest model, the PC88MR-11, with a host of new features that improve production and fuel efficiency with a viscous fan clutch.

"An improved design of the standard blade rolls material better for more efficient dozing or backfill work, which increases the PC88MR-11's versatility and may provide costs savings by not having to use an additional machine," said Tolomeo. "You can further increase versatility with attachments such as hammers and grapples.

The excavator has two-way auxiliary control with a dual-stage relief valve, as well as a thumb mounting bracket – so it will run

practically any tool in the industry. That capability increases its availability and gives you additional applications and potentially better profitability and return on investment."

He added that productivity increases when you can set hydraulic pressure and flow from inside. The PC88MR-11 lets operators do that, which is a change from the previous model. Additional upgrades include better serviceability with larger service doors and centralized ground-level access to filters located within a common area.

"The list of enhancements, improvements and upgrades is long, and we encourage anyone who is looking for a productive compact excavator that increases versatility, to contact their distributor for a comprehensive list and a demonstration," said Tolomeo.



Jonathan Tolomeo, Komatsu Product Manager



Discover more

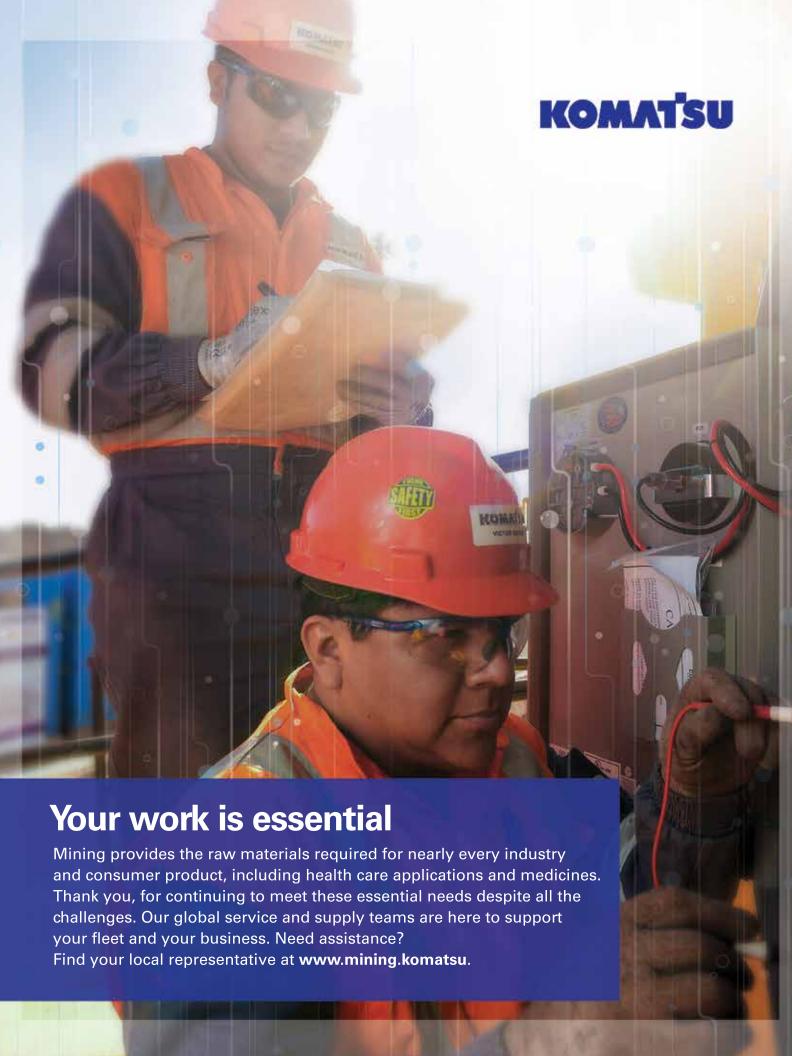
#### **Quick Specs**

Net horsepower 68 hp

Operating weight 18,739-19,224 lb

Bucket capacity 0.12-0.26 cu yd The new PC88MR-11 with a swing boom lets operators position the tracks very close to the structure, then only move the boom. "This allows for digging at various angles while the cab stays in a fixed position," said Jonathan Tolomeo, Komatsu Product Manager. "There is virtually no chance of a counterweight swinging into the house or building as you dig and pile dirt."





# Choosing the right tooth system for your excavators and loaders can increase production and safety

When choosing an excavator or wheel loader it's easy to focus on the big things such as horsepower, operating weight and bucket capacity. But, did you know that overlooking details such as choosing the right teeth for the application and material you are handling can have a major impact on productivity and efficiency?

"As with any important task, it's essential to have the right tool for the job," said Colin Chester, Product Manager, Mining with Hensley Industries. "Digging in clay is different than dealing with rocky situations or soft, sandy soils. You have to factor that into the equation."

Chester added that there are additional considerations that may affect both production and safety. "Simple and easy tooth changes equate to less downtime. Not having to hammer pins means less risk of injury. Our customers told us they valued those features along with high-quality manufacturing."

Chester said Hensley has listened to their customers and has developed an excellent solution - its Kprime™ Tooth System for excavators and wheel loaders that work in construction, mining, quarry, trenching and utility applications. Several styles of teeth are available that fit onto an adapter that's welded onto the bucket lip. Each tooth locks on with the turn of a pin.

#### **Productivity, reliability, safety**

"Productivity, reliability and safety enhancements are all built into the Kprime Tooth System's design," said Chester of the product that has replaced Hensley's Kmax Tooth System. "From a productivity standpoint, the Kprime Tooth System has 10% to 15% more usable wear material than its predecessor and improved penetration of up to 15%. To further extend life, Kprime Tooth System teeth are rotatable, and visible indicators on the wear cap and fastener let users know when those parts need to be changed."

To increase reliability, the Kprime Tooth System is 10% stronger than its predecessor for reduced breakage and adapter wear. It also has a tighter fit of the tooth to the adapter and an improved pin design that prevents unlocking after extended use, ensuring the holding pin remains locked throughout the life of the tooth.

For enhanced safety, locking and unlocking the tooth to and from the adapter is done with a simple quarter rotation of the locking pin using a metric socket. A push out ramp on the tooth helps dislodge the fastener when unlocking. An audible "clack" sound indicates when the tooth is locked on, eliminating guessing.

"This system is unique and was built from customer feedback," Chester emphasized. "We encourage anyone who wants to save time and have a safer tooth system on their bucket to use the Kprime Tooth System. Their Komatsu distributor representatives will help them choose the right teeth, assist them with putting the adapters on the bucket, and teach them how to use the simple locking and unlocking system."



The Kprime™ Tooth System has improved penetration of up to 15% compared to its predecessor. For enhanced safety, locking and unlocking the tooth to and from the adapter is done with a simple quarter rotation of the locking pin using a metric socket. An audible "clack" sound indicates when the tooth is locked on, eliminating quessing.



### New dozer blades for HAMM H Series soil rollers let you move and distribute more material with one machine

Soil rollers are typically considered one-dimensional machines. They compact dirt. What if you increase their versatility and potentially your profitability by using that one machine for multiple tasks? How much could you save in time and operating costs?

"Adding a dozer blade allows you to push material, compact dirt or do both simultaneously. The recently introduced blades for our H Series line give you an excellent option," said Richard Evans, Vice President of Sales for HAMM. "They move and distribute more material, while special skid shoes prevent the blades from digging into the ground. Applications include landfills, trench construction, light earthwork, distributing, plus stripping and/or compacting loose debris."

Blades are available for most HAMM soil rollers ranging from the compact H 5i to the 46,096-pound H 20i CP. All are moved with a single cylinder. For larger compactors, the standard blade width is more than 97 inches wide and 32 inches high. Evans noted that extensions are available for some models.

"The larger dozer blade works particularly well on the H 13i C and CP machines," said Evans. "These models are fitted with larger drive motors and gearboxes for high climbing capability and increased pushing power."

Operators can raise or lower the blades easily using one button on the central control unit joystick. Another button activates the floating position.

#### Clear line-of-sight

Dozing is more productive when the operator has a clear line-of-sight to the front of the blade. The standard H Series blade has a high-visibility cross member that provides an unobstructed view, and a position indicator that gives the operator visualization of the blade's position in relation to the substrate.

HAMM built the robust blade for long life. The hydraulic cylinder is centrally located behind the blade to protect it against material deposits. The wear edge is exchangeable and can be quickly swapped out for a new one.

"Our experts and dealer partners can guide customers to the right blade, or the blade and add-on combination that best suits their needs," said Evans. "We encourage anyone who compacts soil and wants increased production from one machine, to try out an H Series machine with a blade."

HAMM's new H Series dozer blades allow you to push material, compact dirt or do both simultaneously, which increases productivity and efficiency, according to Richard Evans, Vice President of Sales for HAMM. "They move and distribute more material, while special skid shoes prevent the blades from digging into the ground."





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# Using the proper coolant at correct intervals helps ensure that your equipment delivers maximum performance



Alexis Crawford, Komatsu Parts Marketing Associate

If you are looking to protect critical engine components and keep operating temperatures steady, you need the right engine coolant/antifreeze. While the word "anti-freeze" implies protection from freezing, engine coolant is actually critical in all-weather applications, because it transfers heat to prevent both freezing and overheating.

Choosing a coolant specifically designed to work with your machinery is your best option, as it's been tested and developed for those particular systems. Not using the correct type can potentially create issues because each coolant brand has a unique formulation.

"It comes down to how that coolant performs with the other components of the cooling system," said Alexis Crawford, Komatsu Parts Marketing Associate. "If the wrong coolant is used, you are introducing chemicals that may cause premature wear such as

The right engine coolant/anti-freeze keeps operating temperatures steady. Coolant, like other fluids, should be monitored and replaced as part of your preventive maintenance schedule. It is recommended that you use a genuine product manufactured specifically for your machinery such as Komatsu Supercoolant.

leaking seals, which can ultimately affect machine performance."

Each manufacturer has its own stated engine coolant life. Some claim that theirs will last the life of the machine. Crawford said that while this statement may be appealing, equipment users should be cautious about relying on it, as the protection will likely degrade over time. Coolant, like other fluids, should be monitored and replaced as part of your preventive maintenance schedule.

Komatsu distributors can provide oil and fluid wear analysis (KOWA) lab testing to show if there are metals or other minerals in the coolant that have leached in and may indicate a breakdown of internal components. Checking the coolant level daily can tell you if there is any evaporation due to a leak that needs to be addressed.

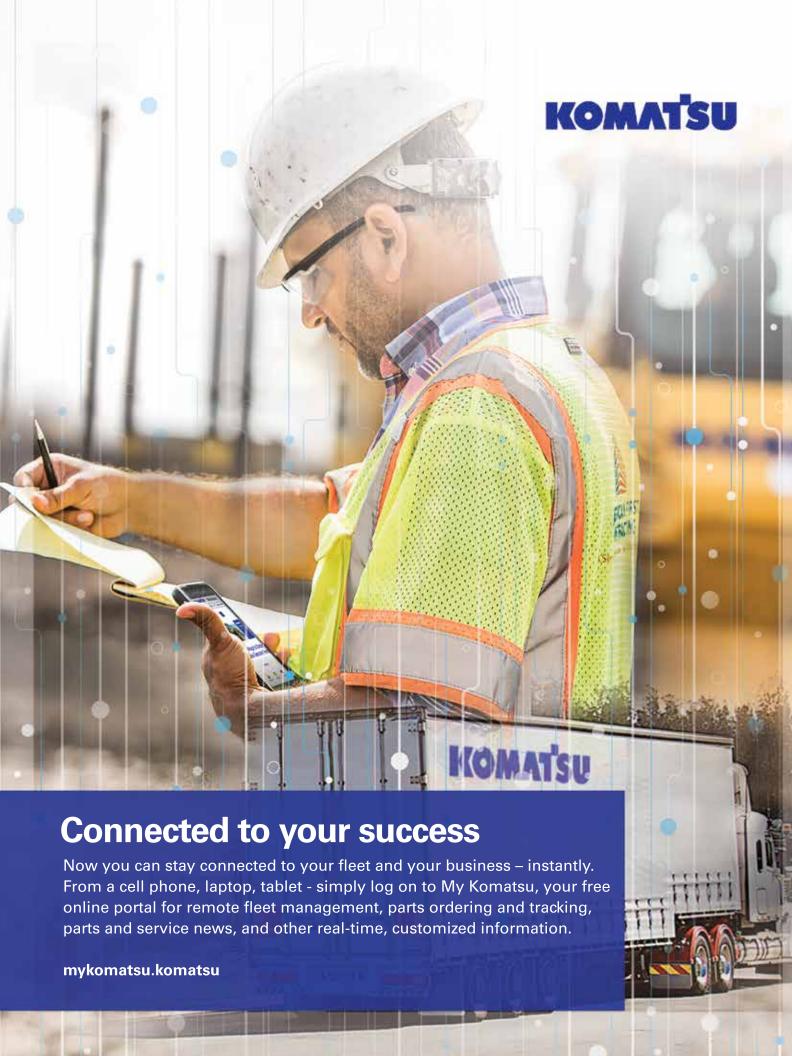
#### **Product offering**

Komatsu recommends using their genuine Supercoolant that is specifically designed to work across the entire product line. It offers two types: a 50/50 pre-mix product that is ready to use and a concentrate product that is mixed with distilled water. Its nitrite-free formula contains a blend of phosphate and organic acid technology (OAT) to help prevent corrosion and oxidation in modern engines. Supercoolant exceeds all ASTM D3306 and JIS K2234 standards, and is available from your Komatsu distributor or can be ordered directly through My Komatsu.

"Komatsu Supercoolant should be replaced every 4,000 hours but could extend up to 6,000 hours for our 50/50 offering," said Crawford. "Your machine operation and maintenance manuals will tell you how much coolant (refill capacity) your machines need."

#### Coolant color - why does it matter?

You will notice that Supercoolant has a distinctive blue color. It is important to never mix different brands or colors of coolant as this can cause contamination and damage to the cooling system. If you are using Supercoolant for the first time, be sure to perform a system flush to avoid contamination.



## Organizations say new infrastructure measures could have a significantly positive effect on the construction industry

Dodge Data & Analytics said that a new comprehensive bill that invests heavily in public works projects would have high economic impact. It pointed out that 2002 was the peak in terms of constant dollars (i.e. adjusted for inflation) for public works construction at \$68 billion. Since then, the average has been \$59 billion annually adjusted for inflation.

"This is arguably the 'low hanging fruit' in any potential infrastructure plan," said Dodge Data & Analytics Chief Economist Richard Branch in a recent article for the organization. He added that additional economic "high-impact" areas would include transit/high-speed rail and renovation work. Renewables could have medium impact economically, while the impact from data centers and health care would be low, according to Branch's article.

The current surface transportation bill (FAST Act) expires September 30 after being extended by a year in late 2020. Congressional committees are working on new long-term legislation that they hope will bring greater certainty to road and bridge funding.

The Senate's Environmental and Public Works (EPW) Committee held a hearing in February

that discussed expanding a five-year bill that was passed unanimously by the committee in July 2019. EPW Chairman Tom Carper said the five-year, \$287 billion plan was a great start, but he wanted to expand it further with provisions to deal with climate change and to make roads and bridges more resilient to natural disasters. The proposed 2019 legislation had \$10 billion in resilience authorizations.

"Much of our transportation infrastructure is in sorry shape," said Carper during the committee hearing. "Unfortunately, a lot of it is getting worse, not better."

#### Latest score: C-

Transportation is not the only infrastructure system in rough shape, according to the American Society of Civil Engineers (ASCE). It recently graded America's entire infrastructure as a C-, a slight improvement from 2017's D+. It said the overall long-term investment gap continues to grow and must be addressed.

"Much remains to be determined, but the possibilities for an infrastructure package on construction are significant," wrote Dodge Data & Analytics Chief Economist Richard Branch. ■

Investment in new and updated infrastructure, including roads and bridges, could have a significantly positive impact on construction, according to industry groups. Legislation is in the works for a new surface transportation bill to replace the FAST Act, which expires September 30th of this year.



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# Could a new extended warranty program help you better determine total cost of ownership over the life of large machinery?



Felipe Cueva, Manager, Genuine Care

Understanding total cost of ownership (TCO) over the lifetime of a machine helps you make highly informed decisions about which equipment to buy. Several factors go into calculating TCO. Some costs are fixed, such as the initial purchase price, while other costs – repair and maintenance, fuel and operators' hourly wages, for example – fluctuate.

Making the variable costs more predictable can help with budgeting and avoiding large, unplanned expenses. It also contributes to higher accuracy in estimating, bidding and determining operating expenses. One way to make costs predictable is by purchasing an extended warranty and extended periodic maintenance with fixed costs for maintenance and repairs.



Komatsu Care Plus III is designed for total cost of ownership for businesses such as quarries or mines that keep equipment for 30,000 hours before rebuilding it or taking it out of service. "Like the other Komatsu Care programs, it covers scheduled maintenance and repairs," said Felipe Cueva, Manager, Genuine Care. "Care Plus III is even more comprehensive because it includes the equipment's consumables or wear parts such as brakes, hoses, pins and bushings."



"Machinery comes with a standard warranty that covers any repairs for the first 12 months," said Felipe Cueva, Manager, Genuine Care for Komatsu. "Once the machine hits those marks, the expenses can be unpredictable and are all covered by you. Car manufacturers started offering extended warranties years ago, and equipment manufacturers have taken up the concept more recently. The advantage is that for a relatively nominal monthly charge, you have the peace of mind that when service or repairs are needed, you won't be hit with a potentially big bill."

Cueva noted that there have been options available for up to 10,000 hours of extended maintenance and repair coverages for some time. Some examples are Komatsu's recently introduced Komatsu Care Plus and Komatsu Care Plus II, as well as its Advantage Coverage. Soon it will offer Komatsu Care Plus III for larger machines, including wheel loaders, rigid-frame trucks and dozers.

"What's been missing is a program designed for those businesses such as quarries or mines that keep equipment for 30,000 hours before rebuilding it or taking it out of service," said Cueva. "Our new Komatsu Care III is a full, comprehensive maintenance and repair program for the first life of the machine. Like the other Komatsu Care programs, it covers scheduled maintenance and repairs. Care Plus III is even more comprehensive because it includes the equipment's consumables or wear parts such as brakes, hoses, pins and bushings."

#### **Clearer profitability picture**

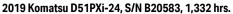
Cueva added that Care Plus Ill's cost is based on utilization. Customers pay a per-hour rate, and Komatsu tracks the machine's hours through its telematics systems. Coverage extends across the country, and contracts are transferrable

"This is really the first commercialized TCO from a manufacturer," said Cueva. "It makes your profitability clearer because there are no surprises. We encourage anyone who would like to better know their lifetime costs to contact their dealer about any of the Care Plus programs."



### **Used Equipment**







2020 Komatsu WA200-8, S/N 86320, 540 hrs.



2016 LeeBoy 8515D, S/N 144214, 798 hrs.

Year/Make/Model	S/N	Description	Hours
Asphalt Pavers			
2016 LeeBoy 8515D	144214	8' to 15' Legend 815HD electric screed	798
2019 LeeBoy 8500D	209875	8'-15' electric screed, low deck	1,135
Compaction	110004044	F.L. DODO	
2019 Hamm HD12VV	H2301814	Folding ROPS	287
Rigid Truck	11101	Tallanda	F 200
2015 Komatsu HD465-7E0	11404	Tailgate	5,200
<b>Dozers</b> 2019 Komatsu D51PXi	B20712	Cab, AC, 28" grousers, PAT blade, UHF radio	2,508
2019 Komatsu D51PXi	10614	Cab, AC, 28" grousers, PAT blade, UHF radio	2,873
2019 Komatsu D51PXi	B20542	Cab, AC, 28" grousers, PAT blade, UHF radio	2,753
2019 Komatsu D51PXi-24	B20583	Cab, AC, 28" grousers, PAT blade, UHF radio	1,332
2019 Komatsu D51PXi-24	B20660	Cab, AC, 28" grousers, PAT blade, 915 radio draw bar	1,521
2019 Komatsu D61PXi-24	B61033	Cab, AC, 34" grousers, PAT blade, draw bar, radio, ant MCR3	2,254
2019 Komatsu D65PXi-24	91792	Cab, AC, PAT blade, UHF ant	1,173
2019 Komatsu D155AX-8	100320	Cab, AC, 28" grousers, rockland 32 cy U blade, LF cw with draw bar	2,752
Excavators			
2015 Komatsu PC138USLC-10	42276	Cab, AC, powerlatch coupler, 36" bucket	4,159
2019 Komatsu PC88MR-10	8704	Cab, AC, 11'2" Boom, 6'11" arm, aux hydraulics, wb coupler, 18" road liners	1,400
2018 Komatsu PC210LC-11	A12563	Cab, AC, 9'7" stick, 48" bucket	1,705
2018 Komatsu PC210LC-11	A12560	Cab, AC, 9'7" stick, 36" bucket	1,723
2017 Komatsu PC210LCi-10	452694	Cab, AC, 31.5" TG, 9'7" arm, UHF, JRB power latch coupler, no bucket	2,162
2018 Komatsu PC240LC-11	95312	4PE11B hydraulics, 10' arm, bucket (foot pedal)	1,865
2018 Komatsu PC290LC-11	A28030	Cab, AC, 10'6" arm, 31.5" TG, aux hydraulics, 42" bucket	989
2018 Komatsu PC290LC-11 2018 Komatsu PC360LC-11	A28032 A36567	Cab, AC, 10'6" arm, 31.5" TG, aux hydraulics, 42" bucket Cab, AC, 36" bucket	1,046 1,157
2019 Komatsu PC360LC-11	A30307 A37321	Cab, AC, 33.5 TG tracks, aux hydraulics, foot pedal control, 10'5" arm, 48" bucket	1,137
	A37321	Cab, Ac, 33.3 To tracks, aux fryuraulics, 1001 pedal control, 10 3 affil, 46 bucket	1,130
Wheel Loaders 2020 Komatsu WA200-8	86320	Cab, AC, quick coupler, forks, bucket	540
2019 Komatsu WA200-8	85395	Cab, AC, coupler, bucket, two-spool	164
2018 Komatsu WA200-8	85058	Cab, AC, coupler, bucket, third-spool, LSD, full fenders	825
2018 Komatsu WA320-8	85442	Cab, AC, coupler, third-spool, 60" forks	2.343
2016 Komatsu WA500-7	A94355	Cab, AC, 8.2 yard loose material bucket, 29.5R25 tires	9,067
Milling Machines		•	
2014 Wirtgen W150i	6130101	Hydraulic folding conveyor, FCS system	4,171
2014 Wirtgen W210i	15200166	Hydraulic folding conveyor	7,794
Articulated Trucks			
2015 Komatsu HM300-5	10084	Tailgate	3,128
2015 Komatsu HM300-5	10083	Tailgate	2,846
2017 Komatsu HM400-5	10495	Tailgate	4,793
2017 Komatsu HM400-5	10492	Tailgate	4,473

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