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March 2022

Industry Scoop

A publication for and about Roland Machinery Co. customers • www.RolandIndustryScoop.com

Ozark Natural Grilling Pellets LLC

Missouri company creates high-quality products perfect for barbequing



John Stucker,
owner

Steve Stucker,
owner

Dave Nance,
manager



A Message from the President



Matthew L. Roland

**2022 looks
bright for
construction**



Dear Valued Customer:

We hope your 2022 is off to a wonderful start!

This year looks like another good one for construction. Industry economists and experts seem to agree that there will be growth overall, and the supply chain issues plaguing material acquisitions and driving up costs will ease in the latter half of 2022. They also believe that's when the impacts of the new infrastructure bill, which Congress passed in late 2021, will begin to take effect. We've highlighted some of the benefits of the bill, aka the Infrastructure Investment and Jobs Act, inside.

Historically, construction and working remotely have not gone hand in hand. After all, dirt work doesn't get done and structures can't be built without workers on-site, right? In some cases, that's evolving. Learn about how remote operations are changing the landscape in today's — and especially tomorrow's — construction industry.

Komatsu is already at the forefront of this change with solutions such as Smart Construction Remote and the new intelligent Machine Control (iMC) 2.0 technology with an optional auto tilt IMU sensor. Inside, you will find more information about these products and how they help save time and reduce costs. Our Smart Construction experts can show you the advantages and help you implement these solutions into your operations.

There are several other interesting and informative articles to help your business, including tips on preparing your staff and equipment for the upcoming busy season.

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

Sincerely,
Roland Machinery Co.



Matthew L. Roland,
President

Industry Scoop



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CORPORATE OFFICE

Raymond E. Roland, CEO
Matthew L. Roland, President
Dan Smith, VP, Product Support
Mike Brunson, General Manager,
Allied Product Support
Jay Germann, General Manager, Used Equipment

SPRINGFIELD DIVISION

Chris Ingram, General Manager

East Peoria, IL (309) 694-3764
4299 N. Main St., Unit A

Springfield, IL (217) 789-7711
816 North Dirksen Pkwy.

CHICAGO DIVISION

Mike McNamara, Vice President/General Manager

Bolingbrook, IL (630) 739-7474
220 East Frontage Rd.

Marengo, IL (815) 923-4966
18210 Beck Rd.

Portage, IN (219) 764-8080
6450 Melton Rd.

WISCONSIN DIVISION

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604 Stokely Rd.

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Franksville, WI (262) 835-2710
3540 Ten Point Lane

Schofield, WI (715) 355-9898
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881 E Commerce Blvd.

Escanaba, MI (906) 786-6920
2600 South Lincoln Rd.

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Palmyra, MO (573) 769-2056
701 Industrial Dr.

Carterville, IL (618) 985-3399
1505 Donna Dr.

'Natural extension' turns into successful venture for trio that leads Missouri company Ozark Natural Grilling Pellets LLC

Ozark Natural Grilling Pellets LLC owners Steve and John Stucker and manager Dave Nance are adamant that the items they produce are "more than just a run-of-the-mill product" you find at any big box store.

"We're not saying ours is the best, but we strive to be," stated Dave. "We're a premium line targeted more toward barbeque shops. All our pellets are made from hardwood, mainly hickory and oak, and made at a particular length so that they feed good through all cookers. Our process makes it so there is not extra dust, fines or foreign materials in the bags."

The Stucker brothers and Nance have taken a stance for excellence with Ozark Natural Grilling Pellets since they worked together to found it in 2014. The idea for the new venture came from an employee working at the Stuckers' sawmill, Stucker Brothers Inc.

"It seemed like a natural extension of the mill and gave us a way to use a byproduct," Steve explained. "The mill produces cross ties, cut stock and flooring lumber. Naturally, sawdust is created, and that's what we use to produce the grilling pellets. We bring it to our Ozark Natural Grilling Pellets facility, dry, grind and regrind it, and send it through presses to make the pellets. When they cool, we bag and ship them out."

Dave added, "I think what stands out is that we don't use any fillers or binders, and we're not using kiln-dried waste and rehydrating it to press it. It's the natural lignin in the wood that compresses with heat that does the job. We only dry to the percentage necessary to press. It smokes better, and because there is purer wood, the flavor is better too. In addition to a pellet smoker, you can use them in smoke tubes for gas, charcoal and electric grills to add more flavor."

Customers across the country

Based in Ellsinore, Mo., the Stuckers and Nance have developed markets for Ozark Natural Grilling Pellets across the United States. Nance admits that growth was slow at first, but it's continued to pick up.

"A lot of it has been word-of-mouth," said Dave. "There is a certain niche of people that seek out the quality pellets when it comes to barbeque, and they seem to really like ours because they keep coming back for more. Freight to ship some places is astronomical, but they are willing to pay, so we think that says a lot about our products."

Dave added that quality and customers come first. "We had started with one original flavor — Ozark Supreme — and due to customers' requests, we have added a hickory and competition blend to the lineup."

Quality equipment that lasts

In addition to Ozark Natural Grilling Pellets and Stucker Brothers, the Stuckers own Ozark Mulch LLC, which also uses some byproducts of the sawmill to make multiple items that are shipped to customers across the country. Between the three companies, they employ about

Brothers John (left) and Steve Stucker own and operate Ozark Natural Grilling Pellets LLC in Ellsinore, Mo. Its high-quality products are made through a process that turns the sawdust from their sawmill, Stucker Brothers Inc., into grilling pellets.





An operator moves materials with a Komatsu WA200-8 wheel loader at the location that houses Ozark Natural Grilling Pellets LLC and Ozark Mulch LLC. Both use byproducts of Stucker Brothers Inc.'s sawmill. "The dust and mulch are light, so the WA200s easily handle those items," said John Stucker, who along with his brother, Steve, own and operate all three businesses. "Obviously, the logs and bundles of lumber at the mill are heavier, but the loaders have no problems with those either. The ability to do both tasks with one size of machine gives us good efficiency and is a cost savings."

30 people, and each business utilizes Komatsu WA200 wheel loaders purchased from Roland Machinery Company with the assistance of Cape Girardeau-based Territory Manager Dan Christensen.

"Dan and Roland Machinery are good to work with, and when we are ready to add a loader, they are right there to help," John noted. "Honestly, we haven't needed them too much because Komatsu's reliability really stands out."

That's been the case since the Stuckers bought their first WA200 about 15 years ago to replace a WA180. They continue to run the WA200, which now has over 20,000 hours on it.

"It still has the same motor and transmission," said Steve. "We focus on quality in our products, and so does Komatsu, and that's why we continue to buy the WA200s. It

sounds comical, but we really never need Roland because we just don't have any issues. They have put the quick couplers on, and we did have them come out and show us a couple features on the newest loader (WA200-8) we bought a few months ago. What we do appreciate is that Dan stops and checks on us and that Roland has service items available when we need them. It's a great relationship."

At the sawmill, operators use forks to move bundles of lumber, and at the site where mulch and grilling pellets are produced, operators move materials with buckets.

"The dust and mulch are light, so the WA200s easily handle those items," said John. "Obviously, the logs and bundles of lumber at the mill are heavier, but the loaders have no problems with those either. The ability to



Dave Nance,
manager



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Continued...

WA200 'gives us good efficiency and is a cost savings'

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(L-R) Roland Machinery Company Territory Manager Dan Christensen talks with Steve Stucker, Dave Nance and John Stucker at Ozark Natural Grilling Pellets' location in Ellsinore, Mo. "Dan and Roland Machinery are good to work with, and when we are ready to add a loader, they are right there to help," John noted. "Honestly, we haven't needed them too much because Komatsu's reliability really stands out."

do both tasks with one size of machine gives us good efficiency and is a cost savings. We have to get them into some tight places such as under a canopy to load the grinders or in sheds, so their size and maneuverability are real advantages too."

New facility

In early fall 2021, Ozark Natural Grilling Pellets' facility caught fire and burned down. While the fire stopped production for a few months, it didn't deter the Stuckers and Nance from moving forward.

"We were determined to build back bigger and better," said Dave. "Capacity-wise, the new facility gives us the capability to do more, and with the increased demand we were seeing, that's a good thing."

Steve added, "There is room for more presses. No matter what we build to in terms of production numbers, we won't lose sight of what's made our products popular. Our intent is to keep the same process in place, so we deliver the same quality that our customers have come to expect." ■

An Ozark Natural Grilling Pellets operator feeds logs into Stucker Brothers Inc.'s sawmill with a Komatsu WA200 wheel loader.





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Infrastructure Investment and Jobs Act brings historic investments

The recently passed \$1.2 trillion Infrastructure Investment and Jobs Act (IIJA), aka the Bipartisan Infrastructure Deal, will reauthorize surface transportation programs for five years and invest \$110 billion in additional funding to repair America's aging roads and bridges. With nearly \$40 billion dedicated to the latter, that is the single, biggest investment in bridges since the construction of the interstate highway system in the 1950s, according to the Biden administration.

Transportation safety programs will see \$11 billion in funding, including \$5 billion for the new Safe Streets and Roads for All program, established to help states and localities reduce crashes and fatalities in their communities. Another new program provides grants to community-owned utilities to replace leaky and obsolete cast iron and bare steel natural gas pipelines. In total, the infrastructure bill is projected to more than double funding directed to programs that improve the safety of people and vehicles.

Largest outlay for water systems

The spending package also includes the largest investments in other infrastructure

systems. To expand access to clean drinking water for households, businesses, schools and child care centers all across the country, \$55 billion will be dedicated to address water contamination and the replacement of lead pipes.

IIJA sets aside \$50 billion to protect against droughts, floods and wildfires, as well as weatherization, in an effort to increase the resilience of physical and natural systems from extreme weather events.

Modernizing for the 21st century

With major investments to connect rural areas, low-income families and tribal areas, \$65 billion will be dedicated to expanding broadband internet access. The bill includes provisions to make internet service more affordable and easier to compare prices.

An additional \$65 billion will modernize the nation's power grid and build thousands of miles of new, resilient transmission lines to facilitate the expansion of renewable energy.

Updates to the nation's power grid should allow more electric vehicles to be charged, and IIJA provides \$7.5 billion to build the

Airports are to receive \$25 billion to address repairs and maintenance backlogs, reduce congestion, and drive electrification and other low-carbon technologies. Ports, rail and buses are among the other public transportation sectors seeing significant funding for modernization.





Roads and bridges receive the largest amount of funding in the Infrastructure Investment and Jobs Act at \$110 billion; nearly \$40 billion of which is dedicated to bridges. Transportation safety is to receive \$11 billion.

first-ever national network of electric vehicle (EV) chargers in the United States. This funding includes the deployment of EV chargers along highway corridors to facilitate long-distance travel, and within communities to provide convenient charging where people live, work and shop.

Updating public transit

In total, the new investments and reauthorization in IIJA guarantee \$89.9 billion in funding for public transit over the next five years — the largest Federal investment in public transit in history. The legislation will improve accessibility to all users, bring transit services to new communities, and replace thousands of deficient transit vehicles with clean, zero-emission vehicles.

The legislation also invests \$66 billion in rail funding to eliminate the Amtrak

maintenance backlog, modernize the Northeast Corridor, and bring service to areas outside of the northeast and mid-Atlantic. Airports will get \$25 billion to address repairs, reduce congestion, and drive electrification and other low-carbon technologies.

Job openings

Additionally, the infrastructure bill will drive the creation of good-paying union jobs and grow the economy sustainably and equitably. Combined with the President's Build Back Framework, it is estimated that on average, 1.5 million jobs per year will be added for the next 10 years.

Opportunities for construction workers, truck drivers, architects, mechanical engineers and cybersecurity analysts, among others, are likely to increase. ■

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Your busiest time of the year is near. Make sure equipment and personnel are ready for maximum production

During the winter months, your machinery may have sat for a long period of time, or you may have kept working and just had routine services done during that time. Either way, it is vital to take steps to ensure your equipment is ready for the busy summer days that lie ahead.

Don't wait

If you have any outstanding work orders or operator repair tickets, finish them as soon as possible. Thoroughly inspect machines a few weeks before the schedule really heats up, and if you find any issues, address them right away. Remember, larger items such as undercarriages take more time to repair, so inspecting them well ahead of time is vital.

Buckets, blades, cutting edges and ground engaging tools such as teeth require attention, too. Make sure there are no cracks, chips or excessive wear that could affect safety and performance; replace if needed. Check that your attachment hoses and connectors are in good working order and ready for hydraulic fluids. Hook them up briefly, and run them to see if they are working properly.

Prepare staff members

Make sure employees are aware of schedules, procedures, emergency protocols, and the dangers and signs of heat-related illnesses. Employees should also know how to report maintenance items, the functions of new machines, and how to use them to maximize production and efficiency. Plus, make sure they have all the necessary personal protective equipment and that it is in good condition.

Stock up on parts

You should have an easily accessible store of basic maintenance items on hand such as grease, fluids, filters and belts. Having these on hand will save you from making frequent trips to the store, and decrease your overall downtime.

Clean the machine

Have you heard the adage that a clean machine runs better? True or not, you should wash your equipment to remove any dust and/or dirt buildup from storage or from use during the winter months. Cleaning can help you spot potential issues. Remove any debris,

Continued...

Thoroughly inspect your machinery before the busy construction season starts to ensure it is ready for maximum performance. Make sure everything is in working order and fluids are at their proper levels. Don't forget to check technology.



Replace damaged parts

... continued

including from the engine compartment. Look out for rodent and/or bird nests.

Don't overlook the inside of the cabs — clean the glass, and dust the consoles and dashes. Replace missing or damaged safety decals.

Charge batteries

If you stored batteries, be sure to check them. Before using them, ensure proper water acid levels and fill, if necessary. Batteries that were not charged during storage should be. Coating battery connections with an anti-corrosion spray can prolong system life. Replace batteries if you believe there is any doubt about their safety or reliability.



During the busy season, your machinery and personnel work hard, so make sure both are ready ahead of time. Check your equipment's undercarriage, ground engaging tools, fluids, components and other critical items. Make sure staff members have all necessary personal protective equipment and that it is in good condition.

Check fluid levels

It is essential to keep fluids at proper levels. Make sure there is an operating and maintenance manual available in your machine year-round, and refer to it for guidance. Be sure to grease any points that require it.

As temperatures rise, you should switch to fluids that properly match the ambient temperatures. If the machine requires diesel exhaust fluid, draining it and refilling it with new fluids to maintain purity and concentration is highly recommended, regardless of if you used the machine during the cold winter months or not. Switch fuel to a summer blend such as No. 2 diesel, and drain the lines of any condensation.

Pay attention to hoses and filters

If fluids are the lifeblood, hoses are the arteries that carry it. Check them for abrasions and leaks; replace immediately if any are found.

Cold can affect filters, so consider replacing them with new ones, including air filtration and air conditioner filters, so operators have a cleaner, more comfortable environment. Dust and contaminants affect filter performance, so keep a close eye on them, and change them as often as necessary.

Don't overlook technology

Check the connections on your aftermarket GPS systems, as well as those that go with removable monitors. Turn the machine on, and test telematics systems to make sure you can monitor machines through your computer or smart devices. ■



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Contractor reaches target elevation faster with new auto tilt bucket control that can follow unique design surfaces

Bobby and Allen Tripp spent countless hours running drag lines and operating dozers for their uncle while growing up on their family's farm. In 1997, the brothers transitioned from farm work when they established their own company, Tripp Bros Inc., which has steadily grown into a turnkey site development operation.

The firm's projects range from installing new construction infrastructure to resurfacing city and town streets. For maximum efficiency, the firm completes all aspects of a project in-house. To meet tightened grade tolerances and compensate for the declining number of experienced operators, the company has turned to GPS-equipped machines.

"The knowledge and skill lost from older operators leaving the industry — and with younger operators replacing them — GPS technology has become essential to our business," stated Bobby. "We rely on the technology to help our operators reach grade. Without our GPS-equipped machines, it would take us three times as long to complete the work."

At its residential jobs, which comprise 75% of the firm's current workload, creating as-built storm retention ponds is a challenge.

"The ponds are an environmentally conscious way to treat water before it's released from the site," noted Bobby. "Because each pond is unique, you can hardly dig them without diverting extra labor and equipment to keep it within tolerances."

Bobby continued, "We've found that with our Komatsu PC210LCi excavator with the new auto tilt bucket control, our operators can build the pond to grade more accurately than they could with a person shooting grade or checking them with a rover."

Maximum efficiency with iMC 2.0 with auto tilt bucket control

Bobby said that the new intelligent Machine Control (iMC) 2.0 technology on the PC210LCi-11, with the optional auto tilt IMU sensor, makes grading the ponds more efficient. By using Komatsu intelligent excavator auxiliary hydraulics, the auto tilt IMU sensor enables automatic control of the bucket/attachment angle to match the cutting edge of the surface.

Like all iMC excavators, the full bucket profile protects against over-excavation — even when the machine is not facing directly toward the target surface. With iMC 2.0 and the IMU sensor, the full bucket edge stays on the surface and automatically returns the bucket to a horizontal position for unloading.

"The machine is set up to tilt the bucket on its own and match a swale based on the design," explained Bobby. "We call it a 'one and done motion' because you don't have to go back and regrade the surface. The tilt bucket slopes, shapes and takes the pond to grade as you go."

"The auto tilt bucket control increases the machine's versatility and removes the need for an iMC dozer to check grade," added Alan Yoder, superintendent. "You're able to tilt the bucket instead of moving the machine to get the correct angle. Even our inexperienced operators find it easier to understand and control."

Bobby notes that the iMC 2.0 PC210LCi excavator improves Tripp Bros' efficiency contouring and crowning roads as well.

"When we're undercutting a section of road, we can undercut the surface at a 2% fall and shape a crown in the road. The precision means we don't have to touch material twice. I haven't seen anything on another machine that compares to what this excavator can do." ■



Bobby Tripp,
president



Alan Yoder,
superintendent



Watch the video

Superintendent Alan Yoder excavates a storm retention pond using a Komatsu intelligent Machine Control (iMC) 2.0 PC210LCi-11 excavator with auto tilt bucket control.

"The auto tilt bucket control increases the machine's versatility and removes the need for an iMC dozer to check grade," said Yoder. "You're able to tilt the bucket instead of moving the machine to get the correct angle."



Technology is changing the construction landscape

Have you ever been pulled over for speeding because a law enforcement officer “clocked” you over the limit? Did you know that the same technology used in the officer’s scanner helps build today’s construction sites?

“We use lidar (light detection and ranging) scanners on tripods or drones to shoot out about 1 million points of light per second. Whenever a laser touches something, its light bounces off the surface and back into the scanner,” explained Ken Smerz, CEO of Zelus, a firm that specializes in building information modeling (BIM) and virtual design and construction (VDC). In the article “Here’s how advances in technology are transforming construction industry,” Smerz continues, “It’s the same technology that police officers use to see if you’re driving too fast, but it’s just recently been used in the construction field.”

Drones equipped with lidar can fly over a site and collect data that can be used to build 3D models. This fast and accurate way of surveying a site provides several benefits, according to Dustin Price, a licensed land surveyor and operations manager at Landpoint LLC. In his blog post “Lidar Inspections Improve Construction

Safety,” Price points out lidar is beneficial because it:

- Delivers accurate surveys quickly at the beginning of a project
- Provides information for simulation and analysis when developing a project
- Identifies maintenance and repair requirements on the project as needed

Tech strategy adoption

Lidar is just one of many technologies trending today in construction. To gain efficiency and increase productivity, companies across the world are adopting technology as they look to lower owning and operating costs.

An analysis and outlook by construction software company InEight Inc. found that 96% of respondents believe technology can improve productivity, and 71% believe it’s already improving the industry. Nearly 100% of contractors said they had a strategy that considered the adoption of technologies for data analytics, project management software, artificial intelligence and machine learning, among others.

According to a recent article, “Construction technology funding skyrockets to record levels” in ConstructionDive,

To gain efficiencies and increase productivity, while lowering owning and operating costs, construction companies across the world are adopting technology. Drones equipped with lidar (light detection and ranging) can fly over a site and collect data that can be used to build 3D models. Lidar is just one of many technologies trending in today’s construction industry.





Virtual reality (VR) and augmented reality (AR) headsets are being used throughout the construction industry for operator training. Until they gain some proficiency, these high-tech devices allow a wearer to mimic the movement of construction equipment without having to be on an actual job site.

U.S. construction technology investor funding reached a record \$2.1 billion in early October 2021 — more than a 100% increase from 2020.

While those are common to most in today's construction industry, there are other technologies gaining prominence that you might not currently be aware of, but will probably know in the future.

BIM for collaboration

Owners, architects and contractors use BIM to collaborate on design and construction at each phase of the project. According to Whole Building Design Guide (WBDG), which is managed by the National Institute of Building Sciences, BIM is a digital representation of physical and functional characteristics of a facility. It serves as a shared knowledge resource for information and provides a reliable basis for decisions during a project's life cycle.

Commonly listed advantages from experts who use BIM include improved communication and coordination, cost and resource savings, higher quality results, early identification of potential problems, and increased safety.

Don't be intimidated

Adopting technology may seem intimidating, but it doesn't have to be with the right approach, according to Damon Haber, co-founder and chief revenue officer at Record360, which helps businesses add the latest products to their operations.

"I was an operator before I became a tech guy, so I understand how it is affecting companies and individuals," Haber said. "Like equipment, devices and apps don't create outcomes; however, they can be valuable tools that help achieve them. Failures often happen when companies try to do too much or have no clear objectives as to why they want to implement certain solutions."

Haber said there are some best practices for introducing technology: start small, set measurable goals and outcomes, and secure commitments from end-users.

"You can always get bigger," Haber emphasized. "Before full implementation, it's wise to do a pilot study, and do it well. You should also look at today's modern solutions, and see how they can flex to match desired goals." ■

Editor's Note: This article is excerpted from a longer piece. To read it in its entirety for additional information about technology trends and how they are playing a role in today's and tomorrow's construction industry, visit <https://www.komatsu.com/blog/2022/technologies-changing-the-construction-landscape/>



New V-series breakers are fully variable to help maximize productivity and lower per-ton costs



Aaron Scarfia,
regional manager,
Komatsu North
America Attachment
Division

Versatility makes breakers some of the most essential tools in the construction and quarry industries. Designed and tested for compatibility with Komatsu PC210 to PC490 excavators, the new JMHB-V breaker series helps customers achieve excellent impact energy and performance on tough tasks such as rock breaking and concrete demolition.

"Komatsu fully variable breakers detect the hardness of the material and adjust stroke and impact force of the strike piston accordingly," said Aaron Scarfia, regional manager, Komatsu North America Attachment Division. "This reduces the amount of blank firing, leading to longer product life."

Advantages of the new JMHB-V breaker series include:

High productivity and efficiency

With minimal wasted energy and subsequent higher operating efficiency, Komatsu's 100% hydraulic-fired V-series breakers modulate their impact force and frequency with up to 16 working positions to match most applications' requirements. Designed to help maximize productivity while helping lower per-ton costs, the breakers are fitted with an innovative energy-saving recovery valve that recuperates energy to drive efficiency.

Fully variable technology

Depending on the application's hardness, V-series breakers automatically select

Designed and tested for compatibility with Komatsu PC210 to PC490 excavators, the new JMHB-V breaker series modulates impact force and frequency with up to 16 working positions to match most applications' requirements.





Komatsu's new hydraulic V-series breakers have several valuable standard features, including automatic greasing, advanced blank firing protection, swivel hose couplings and heavy-duty housing — designed to optimize breaking and lower per-ton costs.

the best piston stroke length and speed. By adjusting to either hard material, with long and powerful strokes, or to softer material, with shorter and faster strokes, the breakers can achieve high production output, with little wasted impact energy.

Valuable standard features

To help owners get more from their investment, Komatsu V-series breakers have several valuable standard features, including automatic greasing, advanced blank firing protection, swivel hose couplings and heavy-duty housing. The shock-dampening systems in the form of upper and lower suspensions help reduce the risk of cracking excavator booms and breaker housings, while the mounted standard automatic lubrication feature helps guard against contamination caused by dust and debris.

Control vibration and noise

For greater operator comfort, suspensions with rubber/poly components help absorb

impact and reduce vibrations through the boom. The completely enclosed sound-dampening housings reduce the amount of noise generated when compared to open-style breakers, to offer customers a solution to addressing noise ordinances in urban applications.

Equipped for dependability

To support regular maintenance of breakers, inspection kits are included with gauges to measure wear on all critical components. Additionally, these breakers are backed by the Komatsu North America Attachment Division, a dedicated hydraulic attachments sales and service team that supports Komatsu distributors. These specialists are factory-trained and experienced with installation, operation, service and rebuilds.

"Fully variable breakers offer excellent efficiency," said Scarfia. "We encourage anyone looking for greater production across a wide variety of demolition applications to contact their dealer representative for more information." ■

Smart Construction Remote helps you support your machines from anywhere, saving you time and expense



Mike Salyers,
senior product
manager, Komatsu
Smart Construction
solutions

Do you need to get data to your machines? Want to help your operators troubleshoot? If you have connectivity and Komatsu's Smart Construction Remote solution, you can do both from anywhere, optimizing your time and making workflows more efficient.

With Smart Construction Remote, construction site managers can help operators troubleshoot issues in real time by viewing the same data they do. Managers can add new files without the time commitment of traditional methods, and transfer design files to multiple machines on-site with one click.

"In today's world, we live by emails, text messages and live chats to get things done quickly, and visualize what needs to be accomplished," said Mike Salyers, senior product manager, Komatsu Smart Construction solutions. "Smart Construction Remote gives you similar capabilities. It's like a live support system for the machine and its operator, allowing you and the operator to make necessary adjustments while making sure the machine has the current information needed to complete a job — without allocating valuable resources and hours to get the machine up and running."

Salyers added that Smart Construction Remote has the capabilities to connect to all types of machines, including Komatsu intelligent Machine Control (iMC) equipment, machines equipped with select Topcon aftermarket systems, and select Topcon data collectors utilizing Pocket 3D field software.

Easy to get started

To get started using Smart Construction Remote:

- Visit Komatsu's My Komatsu webpage and login, or set up an account

- Navigate to the Smart Construction Marketplace (<https://smartconstruction.mykomatsu.komatsu/products>)
- Click on 'Smart Construction Remote' and add it to your shopping cart
- Input payment information when you're ready to check out

Once activated, click 'My Subscription.' When you open the application, the Smart Construction Remote screen will appear after logging in. Begin the activation process to add the machines you want connected to Smart Construction Remote. A red bell will appear on screen, and you can simply follow the prompts from there.

Once a machine has been activated, it can receive files and information remotely. Multiple files can be sent at one time and downloaded from the machine. If necessary, files can be deleted from the machine's control box.

If the operator needs assistance understanding if they are in the correct file or on the correct surface, or if there are issues that prevent them from working properly, Smart Construction Remote can be deployed, and managers can access the monitor and remotely correct machine settings or resolve issues.

"Smart Construction Remote's remote-control function is just like sitting in the cab of the machine, but in the comfort of your office, home or location," said Salyers. "A remote user can navigate the on-screen menus and make the necessary adjustment to the blade control's point

of emphasis, surface offsets, dozing modes and many more. Smart

Construction Remote can also be used as a training tool to show operators how they can perform desired operation by executing functions in front of them, so they can actually see what they need to do." ■

With Smart Construction Remote, construction site managers can help operators troubleshoot issues in real time by viewing the same data they do. New files can be added and design files can be transferred to multiple machines on-site with one click — without allocating valuable resources and hours to get the machine up and running, according to Mike Salyers, senior product manager for Smart Construction solutions.





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OSHA, MSHA adjust civil penalties for inflation

Civil penalties for violations have been raised by the Occupational Safety and Health Administration (OSHA), Mine Safety and Health Administration (MSHA), and other Department of Labor agencies to adjust for inflation. Fines increased by 1.06%, according to a final rule published in January.

OSHA's maximum penalty for repeated or willful violations is now \$145,027 — up from \$136,532. The minimum fine for a willful

violation is \$10,360. The maximum fine for serious, other-than-serious, failure-to-correct, and posting-requirement violations rose from \$13,653 to \$14,502. Failure-to-correct penalties are charged per day.

MSHA's flagrant violation maximum penalty increased to \$291,234 from \$274,175. Yearly adjustment rates are determined by the Consumer Price Index for all Urban Consumers (CPI-U). ■

Survey: cyber threats topped list of business risks globally

Cyber incidents were rated as the top threat to businesses, according to the 2022 Allianz Risk Barometer. The annual survey is based on 2,650 respondents around the world. In the U.S., business interruption ranked at the top of the list. That category was second overall worldwide.

"Ransomware has become a big business for cybercriminals," said Scott Sayce, global

head of cyber at Allianz Global Corporate and Specialty SE, in a statement. "We will see more attacks against technology supply chains and critical infrastructure."

Natural catastrophes moved up to third on the list from sixth a year ago, followed by the pandemic, which dropped from second to fourth place. Changes in legislation ranked fifth. ■



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Remote job site management and operation are changing the construction industry landscape

Could one person control all the earthmoving on a job site from a remote location? While the idea may seem far-fetched, it's closer to reality than you think.

"The market sees this possibility evolving and coming to fruition at some point down the road," said Komatsu's Jason Anetsberger, director of customer solutions. "Mining has had autonomous trucks hauling billions of tons of materials for quite some time, which gives us an indication of what's possible."

Anetsberger added that remote operation, or teleoperation as it's often called, and autonomy on construction sites are "assets that customers continue to express interest in, especially considering the shortage of workers in the construction industry. Having one or a few people controlling large numbers of machines from an off-site location has the potential to lower costs and increase safety."

To a degree, the construction industry has already been using remote

operation. Several manufacturers offer remote-controlled equipment that allows operators to run machines from outside the cab. These have generally been used in highly sensitive and/or dangerous areas — such as cleaning up land mines or moving contaminated soils — but require operators to be on the site, albeit at a safe distance.

Simulators as a prep tool

There are already tools that can help prepare operators for remote operation. Sophisticated training simulators use virtual reality to bring the look and feel of a job site task to operators and potential operators — all without stepping a foot on-site.

During an educational session (Virtual Reality, Augmented Reality, and the Future of Work: Are You Ready for the New Realities?) at CONEXPO-CON/AGG in 2020, Jim Colvin, president and CEO of Serious Labs Inc. — which offers virtual reality training solutions — said simulators continue to gain popularity in construction. He said they are more effective than on-the-job training and a good way to build skills faster, and more safely.

Continued...

Remote control machines have been available for several years. Typically deployed in highly sensitive or dangerous environments, they are gaining prominence as production machines in construction applications.



Technology lets project managers see productivity remotely

... continued

"There are ways of training nowadays using VR (virtual reality) and AR (augmented reality) that are more engaging, immersive, interesting and effective than traditional training methods," Colvin said.

Seeing projects from a distance right now

While the construction industry takes initial steps toward fully automating and teleoperating machines, projects can be managed remotely. In the past, project managers often had to drive from one location to the next, but now they can check on multiple sites from their office, vehicle or job site trailer.

Cell phones and computers ushered in the ability to communicate faster between the office and field personnel, and smartphones are making it even easier with applications designed for timecard management, productivity tracking, job site management and planning, and more.

"There are a multitude of apps available that let project managers view the job site in real or near real time right now," said Bryce Satterly, Komatsu Smart Construction solutions manager. "With digital plans and satellites, they can view an intelligent machine's monitor and see exactly where it is on a site and its relation to the final elevations. It lets project managers see productivity remotely and make adjustments faster. That can save time and money, and increase productivity."

According to Anetsberger and Satterly, virtually managing operations is a gateway to machine teleoperation and ultimately the autonomy of construction equipment.

"Virtual, or remote, machine management is a step in the right direction toward one day having fully remote or autonomous job sites," said Satterly. "Understanding how to use that information and apply it to equipment operation and overall job site management is invaluable. It could be a key factor in full autonomy and remote operation." ■

Simulators can help trainees understand how to operate machinery before they get in the actual cab and may also be a way to prepare for remote machine operation.





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Get real-time insights straight from the field

Success of a job site comes down to a simple question: Did we hit our targets for the day? Tracking the costs of labor, machines and materials are the keys to answering, "Yes." With Smart Construction Field, you can say goodbye to pen and paper, and leverage a connected system to analyze your costs against your bid.

You can:

- Get more accurate job site data
- Easily track and analyze daily spending
- Track job site daily activity
- Make better business decisions

Insider Tip: "With Smart Construction Field you can quickly see if you are ahead, on schedule or behind to give you the ability to make faster decisions that affect production," said Bryce Satterly, Komatsu Smart Construction solutions manager. ■

Learn more about this and other Smart Construction solutions at <https://www.komatsu.com/en/site-optimization/smart-construction/#tab3>



A smooth approach for better productivity

A new modulation clutch in the WA900-8 surface mining wheel loader enables the operator to perform smooth approaches when loading trucks. This feature can also help reduce shock when shuttling between forward and reverse, which is particularly beneficial in v-cycle applications.

Automatic dig, semi-automatic approach and dump systems can reduce fatigue and allow operators to focus more on the path of machine travel.

Throttle lock allows operators to set engine speed. When enabled, auto-deceleration automatically decreases the engine speed to low idle when no operator inputs are applied to the controls and the transmission is in neutral.

All of those features can help improve your production and lower fuel consumption.

Insider Tip: "A high-lift configuration to pair with 150-ton trucks is available, as well as optional add-ons that include KomVision with radar object detection for a bird's-eye view of the machine and its surroundings," said Sebastian Witkowski, Komatsu product marketing manager. ■

See more productivity features of the WA900-8 at <https://www.komatsu.com/en/products/wheel-loaders/surface-mining-wheel-loaders/wa900-8/>



New feature reduces operator fatigue

Want to reduce operator steering input by 80%? Tilt steering control on Komatsu intelligent Machine Control (iMC) 2.0 dozers maintains power to the tracks and automatically tilts the blade for straight travel during rough dozing.

Additional benefits include:

- Reduced operator fatigue
- Greater reduction in track slip
- No surface undercuts

Insider Tip: "Use tilt steering control during heavy cutting applications and when simple grading is off," said Ron Schwieters, Komatsu senior product manager, iMC and hardware. ■



Learn more about tilt steering control and other technological advances in iMC 2.0 dozers and Smart Construction solutions at <https://www.komatsu.com/en/site-optimization/smart-construction/#tab5>



New harvester, forwarder enhance forestry operations' productivity in most terrains

Forestry equipment operates under difficult and demanding conditions. Engineered for the rugged terrain of forestry and logging work, Komatsu now offers two new machines, the 931XC-3 8WD harvester and the 855-3 forwarder.

931XC-3 8WD harvester

Designed for extreme conditions (XC) from smarter thinning to heavy-duty felling, the 931XC-3 harvester is exceptionally maneuverable in most types of forests and terrains. It has been optimized for low working speeds, including a broad powerband and high torque backup for challenging operations.

Among the 931XC-3 features:

- **Unique 8WD system**

For excellent handling, the 8WD double Komatsu Comfort Bogie drive system

follows the terrain more closely than other 8WD machines with a fixed rear-axle design, greatly reducing rear ground pressure. It offers high ground clearance and enhanced traction; hydrostatic transmission matching power and traction; and automatic cab/crane leveling.

- **Powerful parallel crane**

Promote enhanced production with a single control lever movement that extends the boom/arm on a parallel path. The three-pump hydraulic system enables simultaneous slewing, feeding and maneuvering, as well as a ± 180 -degree cab/crane rotation with automatic four-way cab/crane leveling.

- **Modern, large, spacious cab**

Critical to productivity are operator comfort and visibility. The automotive-quality cab on the 931XC-3 8WD harvester includes a giant front window, ergonomic seat, automatic climate control, sound-deadening measures, and heated and cooled meal storage, as well as an easy-to-understand machine interface.

Designed for extreme conditions from smarter thinning to heavy-duty felling, the new 931XC-3 8WD harvester is exceptionally maneuverable in most types of forests and terrains.





A state-of-the-art MaxiXT system on the new 855-3 forwarder gives operators the ability to monitor and control everything from the engine and crane to the transmission and service ladders.

855-3 forwarder

The 855-3 forwarder helps your operators deliver productivity day after day in the 14-metric-ton class, working with them to offer power, smart features and nimbleness.

The 855-3 forwarder includes:

- **Machine and crane control**

Operators can monitor and control everything from the engine and crane to the transmission and service ladders with the state-of-the-art MaxiXT system. All operator-specific functions can be fine-tuned to achieve the sensitivity and speed each individual operator prefers.

- **Smooth and fast transport**

Chassis and suspensions are designed to maneuver through even the most rugged forests when fully loaded. Komatsu Comfort Bogie axles with a high portal offset and V-shaped frames provide high ground clearance.

If your operation requires ground or stump leveling on tough terrain, an optional heavy-duty stacking blade is available for the 855-3. Mounted with a high angle of departure for climbing obstacles, there's no interference between blade, battery boxes or hood guard. ■

For more information about Komatsu's line of forestry and logging equipment, go to <https://www.komatsu.com/en/industries/forestry/>.



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