

A Message from the CEO



Chad Stracener

160

Dear Valued Customer:

This time of year tends to be the busiest in the industry, where machine uptime is critical. We come to work every day with the goal of being a better service provider to our customers. TEC continues to invest in our product support capabilities to ensure we can get you running quickly if your machine has a failure.

To help get projects done on time, proper maintenance is key. Fortunately, most new Komatsu machines come with complimentary Komatsu Care for the first three years or 2,000 hours. Our trained technicians perform the services at your convenience to help limit downtime — typically after normal work hours or when your equipment is not being used.

Komatsu Care also gives you certainty in your owning and operating costs. Learn about Komatsu's new program, Komatsu Care Cost Per Hour, in this issue. We believe it's well worth the investment.

We hope you were able to attend CONEXPO-CON/AGG this past March, but if not, there's a recap of the event inside this issue that provides information about some of the machines that were on display, such as Komatsu's new PC210LCE electric excavator.

Plus, due to the growing demand for off-road trucks in construction, quarry and mining operations throughout North America, Komatsu is once again producing the popular HM400-5 articulated haul truck at its Chattanooga Manufacturing Operation in Tennessee. Check out the article for more information.

As always, if there is anything we can do for you, please feel free to call or stop by one of our 20 locations.

Sincerely,

Chad Stracener

CEO

Never too busy for safety



In this issue

Takco Construction Inc. pg. 4

See how this Georgia-based company improves productivity.

Robbie's Dozer & Construction Services LLC pg. 8

Discover how Robbie Bolton efficiently completes sitework jobs across southern Alabama.

Industry Event pg. 12

Get a glimpse of CONEXPO-CON/AGG 2023.

Innovative Technology pg. 16

Delve into construction equipment electrification.

Tech Talk pg. 21

Check out Komatsu's upgraded machine control monitors and GNSS receivers.

New Payment Option pg. 23

Learn about Komatsu Care Plus Cost Per Hour.

Serving You Better pg. 24

Read about how Komatsu is once again producing its HM400-5 articulated haul truck at its Chattanooga Manufacturing Operation.

Convention Highlights pg. 26

Find out what new equipment was showcased at NDA's expo.

New Forestry Attachments pg. 29

Improve performance with Komatsu's upgraded C144 harvester head and new grapples.

Industry Insight pg. 31

Prevent trench-related fatalities by following OSHA's rules.



Birmingham, AL (205) 591-2131

Tuscaloosa, AL (205) 752-0621 (800) 582-4625

Anniston, AL (256) 831-2440

Alabaster, AL (205) 621-2489

Dothan, AL (334) 678-1832

Huntsville, AL (256) 851-2222 Montgomery, AL (334) 288-6580 (800) 832-9563

Decatur, AL (256) 355-0305

Mobile, AL (251) 457-8991 (800) 233-7213

Panama City, FL (850) 763-4654 (800) 342-2055

Pensacola, FL (850) 505-0550 Forest Park, GA (Atlanta)

(404) 366-0693 (800) 488-0693

Calhoun, GA (706) 879-6200 (800) 827-3072

Macon, GA (478) 745-6891 (800) 786-3120

Columbus, GA (706) 562-1801

Hoschton, GA (706) 654-9850 (888) 334-9850

Kennesaw, GA (678) 354-5533

Augusta, GA (706) 798-7777 (800) 659-3090

Savannah, GA (912) 330-7500 (800) 827-1405

Albany, GA (229) 435-0982 (800) 733-0982

Published for TEC. © 2023 CPI. Printed in the USA.

The **Products** Plus The People To Serve You

Tractor & Equipment Company

Dan Stracener, Chairman of the Board Chad Stracener, CEO DeVaughn Pettit, President

Jeremy Tolbert, Executive V.P./General Manager - Product Support Brett Bussman, Senior V.P./General Manager - AL Jamie Steele, V.P./CFO

Joe Patton, V.P./Regional Sales Manager - AL Autrey McMillan, V.P./Regional Sales Manager - AL & FL Tony Daughtry, V.P./Regional Sales Manager - GA Andrew Pettit, V.P./Regional Sales Manager - GA Mike Burkes, V.P., Service - AL & FL

Brian Holder, V.P., Service - GA Greg Carroll, V.P., Sales-Major Accounts - GA Jason Smith, V.P., Product Support Marketing - GA Chris Lucas, V.P., Information Technology Chris Kohlenberg, Director of Parts Operations Copeland Bush, Director of Product Support - AL & FL Ben Osborn, Director of Product Support-Major Accounts - AL

> Travis Howell, Director of Wirtgen Group Products Mark Shoults, Manager of Used Parts Scott Deitz, Allied Products Manager Tim Thomas, Used Equipment Manager John Pierce, New Equipment Rental Manager

Zach Thomas, Director of Product Support-Major Accounts - GA

Alabama

Birmingham

Bert Suttle, Service Manager Tim Woods, Parts Manager

Tuscaloosa

Jody Thomason, Branch Manager **Keith Watkins,** Service Manager **Matt Tolbert,** Parts Manager

Anniston

Alan Preston, Branch Manager Will Hurst, Service Manager Buck Brown, Parts Manager

Don Burgreen, V.P./Branch Manager T.J. Smith, Service Manager Shawn Pewitt, Parts Manager

Huntsville

Jann Patterson, Parts Manager

Chuck Tibbets, V.P./Branch Manager Christopher Simer, Service Supervisor Drew Bronson, Parts Manager

Randy Hawkins, Branch Manager Jake Osborn, Parts Manager

Montgomery

Andy Huggins, Branch Manager Steven Blake, Service Manager Brad Hubbard, Parts Manager

Chris Howard, Branch Manager Robert Bush, Service Manager Ryne Phelps, Parts Manager

Renew Center

Gerald Blakey, Service Manager

Florida

Panama City

Chuck Tibbets, V.P./Branch Manager Seth Burnham, Service Manager Lloyd Rogers, Parts Manager

Pensacola

Kenneth Smith, Branch Manager Curt Ernest, Service Manager Chris Smith, Parts Manager

Ceorgia

Forest Park (Atlanta)

Kenneth Middlebrooks, Service Manager Joe Bechtel, Parts Manager

Calhoun

Nicholas Kay, Service Manager **Dustin Ghorley, Parts Manager**

Kyle McMahon, Branch Manager Jason Witcher, Service Manager Christian Thompson, Parts Manager

Columbus

Brent Cail, Service Manager Blake Bishop, Parts Manager

Hoschton

Russ Lane, Service Manager Allen Brown, Parts Manager

Kennesaw

Jim Hensley, Service Manager Taylor Oden, Parts Manager

Augusta

Keith Smith, Service Manager Eric Harwell, Parts Manager

Frank Dabbs, Branch Manager Jason Dowd, Service Manager Josh Shoults, Parts Manager

Kenny Bevins, Service Manager Pierce Mosley, Parts Manager



Takco Construction Inc. improves productivity by incorporating Komatsu HB365LC hybrid excavator into fleet



Steve Lowery, Vice President



Justin Boswell, Superintendent

Takco Construction Inc. was founded in 2010 by Byeong "Ben" Im, who named the vertical construction company after his father, Tak, with "co" standing for construction. Headquartered in LaGrange, Ga., Takco shifted its focus to the civil side in 2016, expanding into two divisions: construction and civil. Vice President Steve Lowery noted that the company has grown tremendously over the last few years.

"We've transitioned from renting 100% of our equipment to owning 25-plus pieces of machinery in a short amount of time," Lowery shared. "With that, we're taking on larger projects and expanding the territory we service."

Takco's operations have spread out across 18 states, with its primary territory covering Alabama, Georgia and Florida. The company employs approximately 75 people, and its workload typically consists of mass grading, storm drain, underground utilities, asphalt, and concrete projects.

HB365LC doubles production

Recently, Takco completed work at the Hyundai seating factory in Hope Hull, Ala. The project involved underground utilities, storm structures, mass grading, lime stabilization, cut and fill

excavation, topsoil replacement, pond digging, and base prepping for asphalt. Takco needed an additional machine to meet the project's deadline, so the company rented a Komatsu HB365LC hybrid excavator.

According to Boswell, the HB365LC was used for various site and underground infrastructure tasks on the Hyundai job site. The electric swing motor, a unique feature of the HB365LC, significantly increased productivity by speeding up the truck-loading process for Takco's operators.

"The HB365LC is a great all-around machine," stated Boswell. "It's very versatile and could handle tasks like loading off-road dump trucks, grading, digging ponds, laying storm sewer, and utility work without struggling. When loading trucks, the hybrid electric swing motor typically doubled our production."

The term "hybrid" refers to the combination of a traditional diesel engine with advanced electric technology. In the HB365LC excavator, the electric swing motor captures and regenerates energy during swing braking, which is then used to power the swing motor. This innovative process leads to lower total emissions compared to other excavators in its class.

Takco completes work at the Hyundai seating factory in Hope Hull, Ala. The project involves underground utilities, storm structures, mass grading, lime stabilization, cut and fill excavation, topsoil replacement, pond digging, and base prepping for asphalt.





An operator unloads material with a Komatsu HB365LC hybrid excavator. "We noticed a significant drop in our fuel and DEF consumption shortly after adding the HB365LC," reported Superintendent Justin Boswell. "With higher fuel prices these days, the excavator saves the company a significant amount of money and lowers our overhead."

"We noticed a significant drop in our fuel and DEF consumption shortly after adding the HB365LC," reported Boswell. "With higher fuel prices these days, the excavator saves the company a significant amount of money and lowers our overhead."

Boswell particularly appreciated the HB365LC's responsiveness.

"With a typical excavator, you'll have a delay until you actually start swinging, especially with a heaping load," said Boswell. "With the HB365LC, you don't have that delay. As soon as you hit the joystick, you're swinging with a good amount of speed. You can strike, turn, strike, turn, and stay dialed in."

Takco operators have had positive experiences with the HB365LC due to its reliable performance.

Boswell stated, "Our operators have enjoyed it. They like the reactiveness of the machine, and it's been running hard without any issues and keeping up with what we put it through."

Exemplary support from TEC

Takco holds its relationship with Tractor & Equipment Company (TEC) in high regard,

attributing much of its success to the equipment dealer's unwavering support. Boswell commends TEC's promptness in addressing any issues they encounter.

"Whenever we have a problem, sensor malfunction, or just need to service a machine, TEC is right there," Boswell stated. "We can call them in the morning, and they're usually there that day."

Boswell emphasized that TEC's support helps minimize downtime and maximize uptime.

"It's very important that we're able to keep our machines moving and that we have parts available for repairs to keep our operation going," said Boswell. "TEC helps us achieve that, ensuring our productivity remains consistently high."

Lowery added, "TEC's great. I've known our sales representative, Jody Thomason, personally for 25 years, and we have a great relationship outside of work. There are no delays, whether you're purchasing a piece of equipment, renting a piece of equipment, or getting service work done. You couldn't ask for a better company to work with for your equipment needs."



Continued . . .

'It's been a great machine'

... continued



An operator swings the Komatsu HB365LC excavator to load a haul truck. "As soon as you hit the joystick, you're swinging with a good amount of speed," said Superintendent Justin Boswell.

Advancing into the future

As Takco looks ahead, it is prepared to continue its growth and success in the industry. By embracing innovative equipment like the Komatsu HB365LC hybrid excavator, the company is setting a precedent for efficiency and productivity in its projects.

"We want to continue growing and taking on larger, more challenging projects at a variety of new locations across the United States," said Lowery.

Boswell encourages potential customers to consider the HB365LC for their own operations, given Takco's positive experience with the machine.

"If it's possible, ask your sales representative to let you demo one or rent one to see for yourself how much it can reduce your fuel consumption and impact your productivity," Boswell suggested. "From our standpoint, it's been a great machine."

(L-R) Takco's Pipe Superintendent Jason Otts, Superintendent Justin Boswell and Vice President Steve Lowery work with TEC sales representative Jody Thomason. "You couldn't ask for a better company to work with for your equipment needs," said Lowery.



SMART CONSTRUCTION



Tractor & Equipment Company knows that productivity is a key factor to the success of any job site. Komatsu's intelligent Machine Control technology is designed with your productivity in mind. Through automatic dozing, rough cut to finish grade, iMC-equipped machines help you make every pass count to achieve superior production compared to traditional aftermarket systems.



TEC1943.COM

Robbie's Dozer & Construction Services LLC uses Komatsu iMC equipment to efficiently complete sitework jobs



Robbie Bolton, Owner



Discover more at TECTractorTimes.com

Growing up in Evergreen, Ala., with five brothers and divorced parents led to some tough times, but Robbie Bolton never let adversity affect his character or work ethic. At 15 years old, Bolton escaped homelessness by moving in with his older brother, Tony, where he developed an entrepreneurial spirit that would help him get through high school and pay for college. After a short stint working for an LTL carrier, Bolton bet on himself and founded Robbie's Dozer & Construction Services LLC, a one-man operation based in his hometown.

"I started out doing food plots and had a little convenience store," recalled Bolton. "I had a little dozer, and I grew up doing asphalt and concrete."

Today, Robbie's Dozer & Construction Services employs 10 people and is a licensed general contractor that completes a range of asphalt, concrete and sitework jobs across southern Alabama.

"We take on just about anything that comes our way," noted Bolton. "I never planned to be this big, but to be successful in construction you have to be able to grow and adapt to the jobs that are available. We wouldn't be where we are today without our people showing up every day and doing things the right way."

Home run

Robbie's Dozer & Construction Services recently completed the sitework for a new softball stadium at T.R. Miller High School in Brewton, Ala.

"The public school system has a lot of support down here, and we are grateful to be a part of the project," said Bolton. "As a subcontractor for the job, we provided turnkey sitework, which included demoing the existing structure, installing storm drains, grading the field, and installing the concrete."

According to Bolton, the company utilized its Komatsu D51PXi-24 intelligent Machine Control (iMC) dozer to complete grade work for the softball field, which allowed four laborers to work on other tasks instead of checking grade because of the dozer's GPS capabilities and reliability.

"We mainly use our D51PXi for finish grading," noted Bolton. "Once you plug in the model, it tells you how much base you need and what grade you're on. The field drains perfectly."

Bolton appreciates how comfortable the dozer is as well as the slant-nose design, which helps improve visibility.

"It's just a great, all-around machine," he said. "We couldn't be happier."

Robbie's Dozer & Construction Services is a licensed general contractor that completes a range of asphalt, concrete and sitework jobs across southern Alabama, such as a new softball stadium for T.R. Miller High School.





At T.R. Miller High School in Brewton, Ala., Robbie's Dozer & Construction Services completes turnkey sitework for a new softball stadium with a Komatsu PC240LC excavator and a Komatsu D51PXi-24 intelligent Machine Control (iMC) dozer. Owner Robbie Bolton stated, "The excavators and dozers are super machines, and our operators enjoy having them in our fleet."

Taking on projects like the softball field is more than business to Bolton.

"A lot of fields I played on growing up were nothing compared to what these kids will get to use," Bolton stated. "My dad always said, 'It ain't the grass cutting that matters, it's the weed eating.' Without good equipment and good people, you can't be successful."

Excellent service from TEC

In addition to the D51PXi-24 iMC dozer, the company's fleet of Komatsu equipment includes two PC210LC-11 excavators, several PC240LC and PC170LC excavators, multiple D61PXi-24 iMC dozers, and a D39PXi-24 iMC dozer.

"The excavators and dozers are super machines, and our operators enjoy having them in our fleet," stated Bolton.

Robbie's Dozer & Construction Services works closely with Tractor & Equipment Company (TEC) and sales representative Robert McKee to find the right machines for its jobs.

"Robert comes from humble beginnings as well and is the most honest guy there is," commented Bolton. "He's a great salesman. I couldn't say enough good things about him."

Prior to purchasing multiple Komatsu excavators and dozers. Robbie's Dozer &



With a Komatsu D51PXi-24 iMC dozer, an operator cuts to grade at the new T.R. Miller High School softball field. Owner Robbie Bolton said, "Once you plug in the model, it tells you how much base you need and what grade you're on."

Construction Services relied on competitive brand machines.

"We have a lot of equipment, including a couple pieces from other brands, but none have the visibility and power that Komatsu equipment offers," emphasized Bolton. "I put the D39 head-to-head with our other dozer and the D39 ate it up. On a four-acre lot, we pushed about 20 extra loads of 825b that we didn't need using

Continued . . .

'What's kept us coming back to TEC has been their service'

... continued

the competitive brand machine. I was sold on the Komatsu equipment at that point, but what's kept us coming back to TEC has been their service. It would be much harder to get our jobs to look as good as they do without the equipment and support that we receive from TEC."

51ex

Robbie Bolton (right) shakes hands with TEC sales representative Robert McKee. "Robert comes from humble beginnings as well and is the most honest guy there is," commented Bolton. "He's a great salesman. I couldn't say enough good things about him."

Bolton added that it's easy to get any questions about the equipment answered.

"I can call their service department and talk to them on the phone while they pull up the screen inside a machine and see exactly what I'm looking at," explained Bolton. "That makes the communication straightforward. They're able to diagnose what's going on and make sure that if a technician needs to look at the machine, they already know which parts to bring and have a sense of what's going wrong before they arrive. That limits our downtime and contributes to our ability to stay ahead of schedule on jobs. If you're not dealing with TEC in this area, you're losing."

Looking forward

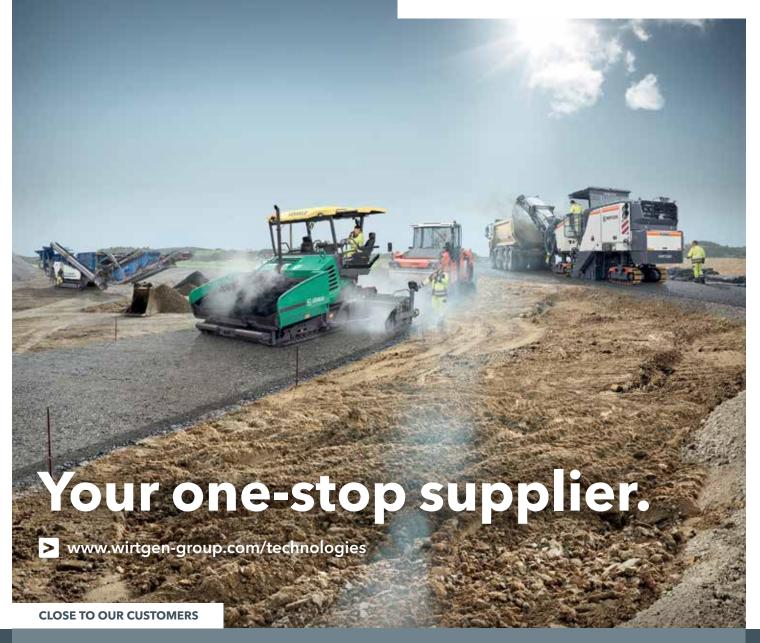
While Bolton never envisioned Robbie's Dozer & Construction Services having a double-digit staff, he plans to stay consistent with work and continue growing as the market dictates.

"As I get older, I'll take more of a superintendent's role and split time between the office and field," noted Bolton. "I've got a son and a nephew at the company who will hopefully fill my shoes as I take a step back. We're here to grow and just keep projects in front of us. Our future is bright right now."

Robbie's Dozer & Construction Services utilizes several Komatsu machines, including a Komatsu PC170LC excavator.







ROAD AND MINERAL TECHNOLOGIES. With leading technologies from the WIRTGEN GROUP, you can handle all jobs in the road construction cycle optimally and economically. Put your trust in the WIRTGEN GROUP team with the strong product brands WIRTGEN, VÖGELE, HAMM, KLEEMANN.

> www.wirtgen-group.com

WIRTGEN

VÖGELE

HAMM

KLEEMANN



Alabama

ALABASTER DOTHAN
ANNISTON MOBILE
BIRMINGHAM MONTGOMERY
DECATUR TUSCALOOSA
HUNTSVILLE

Georgia

ALBANY PARK
AUGUSTA HOSCHTON
CALHOUN KENNESAW
COLUMBUS MACON
FOREST SAVANNAH

Florida

PANAMA CITY PENSACOLA



CONEXPO-CON/AGG 2023 attendees see the future of construction as manufacturers highlight electric equipment



Electric! That describes both the atmosphere and an abundance of new machines at CONEXPO-CON/AGG 2023, which was held March 14-18 in Las Vegas. With an eye toward sustainability, a host of manufacturers across multiple industries debuted electric and autonomous equipment designed to reduce fuel usage and carbon footprints.

A record crowd of more than 139,000 people attended North America's largest equipment show, which was co-located with the International Fluid Power Exposition (IFPE) at

the Las Vegas Convention Center. More than 2,400 exhibitors from 36 countries were spread out across approximately 3 million square feet of exhibit space, which was about 10% larger than the previous show in 2020.

"The innovations in the construction industry unveiled this week will play a role in helping construction professionals drive meaningful and sustainable economic growth," said CONEXPO-CON/AGG Chair Phil Kelliher. "Live events in the construction industry are very important, because you can see, touch and experience the products. That value was reaffirmed this past week across the show floor."

Sustainable focus

Komatsu introduced innovative electric products such as the 20-ton PC210LCE electric excavator that features Proterra's lithium-ion battery technology. It has 451 kilowatt hours (kWh) of battery capacity that offer up to 8 hours of operating time, depending on workload conditions and application.

Suitable for a diverse range of workplaces, including indoors, the Komatsu PC30E electric mini excavator with a 35-kWH battery and a 17.4-kilowatt electric motor was on display. The PC30E is designed to be fast-charged, and it offers quiet and simple operation with zero emissions and no vibrations.

Attendees had the opportunity to see Komatsu's smallest electric excavator —



Manufacturer representatives were on hand to answer attendees' questions about equipment and technology. "CONEXPO gives us the opportunity to show attendees how Komatsu can be an end-to-end solutions provider with equipment and digital tools that can help increase efficiency and reduce costs," said Komatsu's Brandon Rakers, Senior Product Manager for Technology Business Solutions (pictured above, right).

At CONEXPO-CON/AGG
2023, Komatsu introduced
innovative new electric
products such as the
20-ton PC210LCE electric
excavator that features
Proterra's lithium-ion
battery technology.





In addition to electric equipment, Komatsu showcased its new PC900LC-11 excavator, which was paired with a Komatsu HM400-5 articulated truck.

the PC01E electric micro excavator. Developed jointly with Honda, it is powered by portable and swappable mobile batteries. The new machine is designed for confined spaces in landscaping, agriculture and construction.

Komatsu's vision for the swappable battery system is to scale up the technology for use in larger micro excavator models. The PC210LCE, PC30E and PC01E will be available in select markets later this year.

Komatsu also showcased three types of charging infrastructure, as well as its WA electric wheel loader prototype with a chassis based on the WA70. The wheel loader prototype utilizes an "intelligent electrification system" that features an electric traction motor, lift, tilt and steering cylinders, power electronics, a system control computer, a battery, and a battery management system.

In addition to electric equipment, Komatsu highlighted its HB365LC-3 hybrid excavator designed for high production and efficiency with low fuel consumption. Its hybrid system can provide an additional 70 horsepower on demand and allows operators to be up to 15% more productive in Power mode. The hybrid's environmentally friendly operation offers up to 20% more fuel efficiency and 20% less carbon dioxide emissions compared to the standard PC360LC-11.

Also on display was Komatsu's suite of Smart Construction solutions — Dashboard, Design, Drone, Field, Fleet, Office, Remote and Retrofit — designed to optimize the job site, as well as its new Smart Quarry solutions that help increase efficiency, improve production, and maintain a high level of performance, such as Smart Quarry Site and Smart Quarry Study.

Lastly, Komatsu featured its intelligent Machine Control (iMC) 2.0 dozers and excavators, along with the new PC900LC-11 excavator, and other construction and forestry machines.

"We had a lot of great conversations at the show and really wanted customers to take away that we are committed to working with them to create value together," said Komatsu's Brandon Rakers, Senior Product Manager for Technology Business Solutions. "CONEXPO gives us the opportunity to show attendees how Komatsu can be an end-to-end solutions provider with equipment and digital tools that can help increase efficiency and reduce costs."

CONEXPO-CON/AGG is scheduled to return to the Las Vegas Convention Center March 3-7, 2026. ■

Learn more about Komatsu at CONEXPO: https://www.komatsu.com/events/conexpo/?utm_source=Komatsu&utm_medium=PressRelease&utm_campaign=ConExpo2023&utm_content=pc900



Learn more

Continued . . .

'It's been a great time'

... continued

Electric experience at CONEXPO



"This is our first CONEXPO experience. It's mind-boggling how large it is, but that's why we came. We wanted to know what's coming, so we can gear our business around where the industry is going."

- Sy Kirby, Sy-Con Excavation & Utilities

"It's a chance to see what's new in equipment and how it could possibly help our business. I ran a simulator that was just like actually operating a real truck. It would be great for teaching new drivers." – Jesse Cummings, Scott Schofield Construction Inc.





"We see CONEXPO as an opportunity to experience a little more outside of what we do every day. It's been a great time." – Jon Martzall, Iron Eagle Excavating



(L-R) Dunham Enterprises Inc. was represented by Franklin and Brandy Dunham from Ludowici, Ga.



(L-R) Piedmont Paving's Cameron Collins and Andrew Trammell checked out the Komatsu machinery on display.



(L-R) From Box Springs, Ga., AACR Inc.'s Philip Cook, Samuel Sizemore and William Sizemore visited the Komatsu booth at CONEXPO-CON/AGG 2023.



(L-R) Brandon and Ashton Simpson from Simpson's Trucking & Grading Inc. explored the Las Vegas Convention Center.



Fredrick Hutchins (left) and Larr Amerson (right) from S T Bunn Construction Company Inc. talked to a Komatsu representative about My Komatsu and Smart Construction solutions.



of Performance and Service



www.tractor-equipment.com

ALABAMA

ALABASTER ANNISTON BIRMINGHAM DECATUR DOTHAN HUNTSVILLE **MOBILE MONTGOMERY TUSCALOOSA**

GEORGIA

ALBANY **AUGUSTA CALHOUN COLUMBUS FOREST PARK HOSCHTON KENNESAW** MACON **SAVANNAH**

FLORIDA

PANAMA CITY **PENSACOLA**

Ultralok® Tooth System

Construction equipment electrification: a glimpse into the future of the electric job site



Andrew Earing, Director of Tracked Products and Service, Komatsu

From electric vehicles (EVs) to mining equipment, the shift toward an electric-powered world to reduce carbon emissions — including construction equipment electrification — has already begun.

The Bipartisan Infrastructure Law, which President Joe Biden signed in November of 2021, includes an investment of up to \$7.5 billion for EV charging stations to help build out a national network of 500,000 EV chargers.

Additionally, the Bipartisan Infrastructure Law created a joint office between the Departments of Energy and Transportation to collaborate with local communities and provide technical assistance to support the creation and development of EV charging infrastructure.

Actions are being taken at the state level as well. The California Air Resources Board announced the Advanced Clean Cars II rule in August of 2022 that codified Governor Gavin Newsom's climate goals for the state. The rule established that all new cars and light trucks sold in California must be zero-emission vehicles by 2035.

"While electrification is at the forefront of everyone's mind due to automotive, our equipment on the construction site is often creating that infrastructure for electric automobiles," remarked Andrew Earing, Director of Tracked Products and Service at Komatsu.

An operator places a battery in an electric Komatsu machine. "While electrification is at the forefront of everyone's mind due to automotive, our equipment on the construction site is often creating that infrastructure for electric automobiles," remarked Andrew Earing, Director of Tracked Products and Service at Komatsu.

"There are challenges, and we have solutions to those challenges that we are exploring, but it's not going to be a one-size-fits-all solution for the various applications and the various sizes of the products that we provide."

The electric advantage

Komatsu recently showcased a PC210LCE electric excavator and a fully electric compact wheel loader prototype at Bauma 2022, an international trade fair that was held in Munich, Germany, as well as CONEXPO-CON/AGG 2023 in Las Vegas.

In a press release, Seiichi Fuchita, Chief Technology Officer and President of the Development Division at Komatsu, noted that for Komatsu to reach its target of reducing the CO2 emissions of products in use by 50% by 2030 (from 2010 levels), and "to achieve carbon neutrality by the end of 2050, we are looking for promising technologies from suppliers to accelerate our electric machine development."

"Industries including construction are trending in the direction of carbon neutrality," added Earing. "We want to be a leader. We are a technology leader when it comes to construction and mining equipment. We feel that electrification is one viable option in the construction space."

With the PC210LCE, Komatsu created an electric excavator from a popular size class.

"We wanted to introduce the 20-ton size class, because it opens us up to a lot of different operating applications and environments," explained Earing. "They're going to be used indoors and outdoors. It's a very diverse size class, and we wanted to get a much better understanding of all those applications and how they work with electrification."

In 2023, the PC210LCE will begin to see real work on the job site.

"In North America, we are going to conduct a pilot program where we will work with many of our customers to jointly test not only this machine, but the solutions for our customers' applications to better understand the benefits to them, and how we can help meet their needs," said Earing.

Meanwhile, a Komatsu electric wheel loader prototype, created in collaboration with Moog, is currently undergoing further tests to enhance and showcase the advantages of a fully electric



Komatsu's PC210LCE electric excavator provides immediate advantages over a combustion machine, such as better air quality and reduced noise. "It can operate in areas where it may not have been able to operate before, and for longer durations," said Andrew Earing, Director of Tracked Products and Service at Komatsu.

machine, such as increasing its operating cycle, adding assist functions, and creating a comfortable environment for the operator. The wheel loader also has sensors to add automation capabilities.

Compared to its combustion predecessors, electric machinery provides two immediate advantages: better air quality and noise reduction.

"With a zero-emissions machine, it allows the flexibility for that piece of equipment to operate indoors without harming the air quality around it," said Earing. "It can now operate in areas where it may not have been able to before and for longer durations. When you have a traditional emissions vehicle operating indoors, air quality has to be monitored, and sometimes the machine must be shut down for extended periods of time to let emissions dissipate."

Metropolitan and urban worksites are often accompanied with restrictions for when a contractor can work — in part to reduce noise pollution for the populace.

"That's why urban environments are another application for electric machines," Earing continued. "It's not only due to exhaust emissions, but also because of sound emissions. Going with an electrified machine, which has near zero sound emissions, allows

for an extended operating window for our contractors and customers."

Bridging the gap to construction equipment electrification

While combustion engines will remain crucial to the development of electric infrastructure, there is currently hybrid machinery available to help the transition between 100% combustion and 100% construction equipment electrification.

Komatsu released its first hybrid excavator in 2008, and its most recent model, the HB365LC-3, entered the market in 2017.

"The HB365LC-3 offers increased fuel efficiency without sacrificing power. A topper on the cake is the added benefit of reduced emissions that lowers your carbon footprint and promotes sustainability," said Kurt Moncini, Senior Product Manager at Komatsu. "Based on the Environmental Protection Agency's CO2 formula, the hybrid potentially offers up to a 20% reduction in CO2 emissions compared to the standard PC360LC-11."

The force behind the excavator's fuel savings is its electric swing motor, which offers a glimpse into the capabilities of future electric excavators. The electric swing motor captures and regenerates energy as the upper structure slows down and converts it to electric energy.



Kurt Moncini, Senior Product Manager, Komatsu

Continued . . .

'Swing is fully electric'

... continued

Moncini explained, "It's using energy that would normally be wasted and makes it available to do work, contributing to increased efficiency and decreased diesel usage."

The energy captured during each swing braking cycle is stored in the HB365LC-3's ultracapacitor. Each time the excavator swings, the capacitor discharges electric power to the electric swing motor.

"A traditional battery requires time for the chemical process that releases electricity to occur," stated Moncini. "The heavy work nature of construction equipment places a much faster demand on power transfer. The ultracapacitor's ability to store and discharge energy quickly makes it ideal."

He added, "Since swing is fully electric, all available engine power can go to the boom, arm and bucket when bringing a loaded bucket out of the ground and over a truck, spoil pile or hopper. This creates a faster cycle time and a very quick, responsive swing."

In addition to powering the swing motor, the ultracapacitor sends electric energy to the engine via the motor-generator. This energy is used to accelerate the engine from an ultra-low idle speed of 700 revolutions per minute (rpm) and improve hydraulic response.

It is this technology that can likely be applied to future electric excavator models to extend battery life and increase power.

"Komatsu has the technology to not only capture but also supply energy into an electric swing motor, which gives the HB365LC-3 up to an additional 70 horsepower that it can use for efficiency needs or even use for additional performance needs depending on the customer's application," said Earing.

Steps toward carbon neutrality

Complete construction equipment electrification and hybrids are at the forefront of construction's push toward carbon neutrality, but electrification is just a part of what the industry sees as a solution to meeting carbon goals.

"We're not just exploring electrification — we're also exploring other technologies that are out there such as hydrogen fuel cells and clean fuels," said Earing. "We're looking at all of these options because we're making sure that we have the right solution for the right job site and customer application."

Earing concluded, "In the future, I would say that the trends that we see in carbon neutral machines will depend on the machine application, plus size and weight. With different sizes, there are going to be different technologies that suit those machines."

Hybrid equipment, such as the Komatsu HB365LC-3 excavator, bridges the gap between combustion and electric machinery. "The HB365LC-3 offers increased fuel efficiency without sacrificing power. A topper on the cake is the added benefit of reduced emissions that lowers your carbon footprint and promotes sustainability," said Kurt Moncini, Senior Product Manager at Komatsu.







TEC1943.com

Alabaster Anniston Birmingham Decatur Dothan

Huntsville Mobile Montgomery Tuscaloosa

Panama City Pensacola



3 STATES 20 LOCATIONS 29 PSSRs



ALABASTER

DALTON CAMPBELL (256) 586-7336

ANNISTON

BARRY THORNBURG (205) 365-4546

BIRMINGHAM

ALAN COOPER (205) 965-4131 JOHN BARBEE (205) 363-0870

DECATUR

RICKY MATHIS (256) 338-4574

DOTHAN

ANDREW LARSEN (334) 350-4392

MOBILE

CHASE BRYANT (205) 546-0186

MONTGOMERY

TOULOUSE JOHNSON (334) 306-9541 TRIPP ADAMS (334) 850-8249

HUNTSVILLE

GARY DODD (256) 677-3877

TUSCALOOSA

KENT WATKINS (205) 361-0083

FLORIDA

PANAMA CITY

JOEY MAJORS (850) 527-1840

PENSACOLA

MIKE DOUGLAS (850) 554-3234



GEORGIA

ALBANY

DOUG HAAS (229) 349-3383 JON DONNELLY (229) 942-3214

AUGUSTA

DANIEL HOBBS (706) 834-7056

CALHOUN

EDWIN MURRAY (770) 608-6525 ANDY WORLEY (770) 548-5342

COLUMBUS

GEORGE COPELAN (706) 577-4163

FOREST PARK

NICHOLAS WINKLER (423) 664-3013 CODY SMITH (205) 454-0458 ZACHARY BRISCOE (770) 519-9616

HOSCHTON

JOHN MALCOM (404) 886-0610 CARTER WOOD (678) 733-2981

KENNESAW

JACOB ALTMAN (678) 237-1520

MACON

BOB RALEY (478) 952-5266 MARK CATHEY (770) 584-7277

SAVANNAH

PATRICK HOYT (478) 973-4272 CODY REEVES (478) 957-0936



PRODUCT SUPPORT TEAM



New replacement monitors, GNSS receivers provide upgrades to your existing intelligent Machine Control devices

Komatsu's intelligent Machine Control (iMC) equipment has always been on the cutting edge of technology that automates grading and excavating. To ensure that's the case on all models of iMC equipment, Komatsu has now introduced remanufactured, upgraded machine control monitors and GNSS (global navigation satellite system) receivers.

"Komatsu always looks to upgrade its equipment and components in order to increase our customers' efficiency and production, and we updated these devices to the latest technology as well," said Goran Zeravica, Senior Product Manager, Reman. "There have been slight changes to the hardware, but the biggest upgrades came in software that makes them even more effective than the previous models."

The new devices are replacements for the original monitors in iMC dozers and excavators and their GPS/GNSS receivers. All are now Komatsu Genuine Reman with proprietary technology, including the PH700 iMC excavator monitor (replacing the older X31) that shows

operators where cuts and fills are, as well as other job site features. Users can upgrade their GX-60 to a new GX-55 in iMC dozers. As with the PH700, the GX-55 shows cuts and fills and other job site features.

Previous MC-i3 GNSS receivers have been replaced with new MC-i4 models, which provide GPS/GNSS positioning for the machine, so it knows where it is on the job site and in relation to final plan elevations.

Available through distributors, My Komatsu

"As with cell phones, which you upgrade periodically to have the latest technology, we encourage you to do the same with your iMC devices," said Arash Moghaddamzadeh, Product Manager, Reman Products and Forestry Aftermarket. "These new devices are available through your Komatsu distributor by contacting your product support representative, technology solutions expert, or through the parts department. Additionally, they are available as Reman by using your My Komatsu account."



Goran Zeravica, Senior Product Manager, Reman, Komatsu







Retrofit

Komatsu Care Plus Cost Per Hour gives you a fixed hourly rate on unlimited services for 60 months

As your machines age, increase certainty in your owning and operating costs with Komatsu's new Komatsu Care Plus Cost Per Hour program that delivers unlimited scheduled maintenance services at a fixed rate for 60 months.

"Komatsu Care Plus Cost Per Hour is a subscription-style billing plan that gives customers a very cash-flow-friendly alternative and lets them extend coverage beyond the complimentary maintenance period," said Komatsu National Accounts Manager Felipe Cueva. "There is a nominal, up-front, opt-in charge. Customers then lock in their cost per hour for that 60-month period and are billed based on the machine's monthly usage. Price protection is built in. The rate doesn't change, which offers a hedge against inflation and rising costs."

The benefits of Komatsu Care Plus Cost Per Hour include:

- Unlimited hours
- Up to 60 months of coverage guaranteed
- Price protection
- Total periodic maintenance (oils, filters, labor, travel and oil sampling)
- Monthly payments based only on machine utilization reported in Komtrax
- National coverage

How it works

"For example, if the rate on their particular machine is \$5 per hour and the customer used the machine for 10 hours, they would be billed \$50," Cueva explained. "If they put 100 hours on the machine, the cost would be \$500 for that month."

The usage is tracked with Komatsu's Komtrax telematics system to ensure accurate billing.

"Added peace of mind comes in knowing that, as with other Komatsu Care programs, the services performed with Komatsu Care Plus Cost Per Hour are done by certified technicians," said Cueva.

He also noted that Komatsu Care Plus Cost Per Hour is restricted to current production models such as Dash-11 excavators. Hourly rates vary depending on machine. Once the initial 60-month period ends, customers may opt in again at the current rate.

"Customers can cancel their subscriptions at any time after 1,000 hours and two completed services without penalties or fees," said Cueva. "We encourage anyone who wants more certainty in their costs to check this out, as well as other options through My Komatsu. Your local Komatsu distributor can help get you covered."



Felipe Cueva, National Accounts Manager, Komatsu

Komatsu Care Plus Cost
Per Hour locks in a fixed
hourly rate for 60 months,
and customers are billed on
their monthly usage, which
is tracked with Komatsu's
Komtrax telematics
system to ensure accuracy.
Services are performed by
certified technicians.



Komatsu restarts production of popular HM400-5 articulated haul truck at its Chattanooga Manufacturing Operation



Rod Schrader, Chairman/CEO, Komatsu North America



Bruce Boebel, Director of Products and Services for Wheel Products, Komatsu

Due to the growing demand for off-road trucks in construction, quarry and mining operations throughout North America, Komatsu is once again producing its HM400-5 articulated haul truck at its Chattanooga Manufacturing Operation (CMO) in Tennessee. The trucks were produced at CMO in the mid-2000s, but production shifted to Japan, where it has remained until now.

"The HM400 is a very popular truck because it's built for reliability and durability," said Bruce Boebel, Director of Products and Services for Wheel Products at Komatsu. "We're excited about reshoring production here in North America. As trucks are completed, they're on a lowboy going to a customer's site immediately."

Komatsu designed the 473-horsepower HM400-5 to move material across challenging terrain while delivering productive, consistent performance for operators of all skill levels. It has a 44.1-ton payload and a low loading height of 10 feet, 5 inches.

"The HM400-5's versatility makes it a great fit for a variety of applications," Boebel noted. "A dump bed for hauling materials is most common with the HM400, but they can be customized for water and lube trucks too."

First off the line

Rogers Group Inc., an aggregate producer and highway construction company based in Nashville, Tenn., purchased the first HM400-5 off the CMO line and is using it in one of its 70-plus quarries, along with many other Komatsu products.

"We have found as we study owning and operating costs of all our fleets that the HM400 gives us the best overall value [on articulated trucks]," said Darin Matson, President and CEO of Rogers Group. "Komatsu is a big supporter of our industry, and that's something we look at in our equipment-buying decisions. Of course, we think it's great that they are building the HM400 right here in our home state."





Optimum traction in soft ground

The HM400-5 features the Komatsu Traction Control System (KTCS) that is designed to provide excellent traction in soft and slippery ground conditions without sacrificing steering performance. If conditions worsen and the truck detects tire slippage, the inter-axle-lock kicks in. If tire slippage continues, it will automatically apply an independent brake to the wheel on which the slip was detected to help regain traction.

Boebel added, "The hydro-pneumatic seat suspensions help cushion the ride for operator comfort and reduced fatigue."

An integrated payload meter is standard and displays loaded-material weight on the in-cab monitor. External lamps illuminate green, yellow or red as the payload increases to help prevent under- and over-loaded haul cycles.

Komatsu made service convenient with a lightweight resin hood and a cab that tilts rearward for easy access to the engine and transmission. Production data and other information is stored on board the HM400-5 and is accessible by plugging a laptop into a port or remotely via Komtrax. Users can monitor daily, weekly or monthly detailed data to allow for full production studies.

"We have seen the demand for our HM400-5 trucks grow significantly in both the U.S. and Canada, which is why we began producing the trucks here in the U.S.," said Rod Schrader, Chairman and CEO, Komatsu North America. "The domestic production of this popular truck supports Komatsu's commitment to jobs and manufacturing in the U.S." ■



Darin Matson, President/CEO, Rogers Group Inc.



National Demolition Association's expo showcases new equipment from Montabert, Lehnhoff, Komatsu



Aaron Scarfia, General Manager, Montabert USA



Scott Ruderman, Product Marketing Manager, Komatsu

The National Demolition Association (NDA) recently hosted its annual convention and expo in Phoenix. The four-day event consisted of live demos, training seminars and equipment walkarounds.

"NDA's annual show is a great opportunity for manufacturers to showcase their equipment and interact with customers," said Aaron Scarfia, General Manager of Montabert USA. "At the show, we introduced the new Lehnhoff SQ80V fully hydraulic symmetric quick coupler system, which is generating a lot of interest. We're excited to bring it to market."

The SQ80V was mounted on a Komatsu PC360LC-11 excavator for the NDA's Live DEMOlition Event. Experienced operators tested the SQ80V's capabilities by switching between four attachments: a Tramac TR40 plate compactor, a Montabert V46 hydraulic rock breaker, a Montabert HCM750M multiprocessor, and a Montabert 32-1200 grapple. Once familiar with the controls, operators were able to switch attachments in roughly 30 seconds.

"One of the primary benefits of the fully automatic quick coupler is the orientation of the valve block," explained Scarfia. "The valve block from the S side of the coupler connects directly in the center of the attachment. When the coupler comes down on top of the adapters, which are mounted to each attachment, it creates a vertical connection versus a horizontal connection. This creates a fully symmetrical connection, so the attachments can be used 180 degrees in either direction."

New Komatsu WA475-10 WH

Throughout the expo, attendees could check out the new Komatsu WA475-10 WH wheel loader, which is outfitted with a waste package that features a protective rear guard, underframe guard, axle seal guards, and stainless-steel-wrapped cylinder hoses.

"With à la carte guarding options, the WA475-10 WH can be customized and used for any number of applications, such as aggregates, waste handling or scrap handling," noted Scott Ruderman, Product Marketing

Experienced operators tested the Lehnhoff SQ80V fully hydraulic symmetric quick coupler system's capabilities by switching between four attachments, including a Montabert 32-1200 grapple. "The attachments can be used 180 degrees in either direction," noted Aaron Scarfia, General Manager of Montabert USA.





Montabert and Komatsu employees speak to attendees about the new Lehnhoff SQ80V fully hydraulic symmetric quick coupler system outfitted on a Komatsu PC360LC-11 excavator.

Manager, Komatsu. "The machine is fully guarded to protect vital machine components and helps keep the operator protected while working in harsh environments. The WA475 also has great bucket capacity. It can handle large quantities of material or switch to a trash grapple and clamp down on oversized and odd-shaped material."

As the newest wheel loader developed by Komatsu, the machine features several technical capabilities ideally suited for waste and scrap applications.

"When the machine is equipped with smooth, solid tires, the Komatsu Hydraulic Mechanical Transmission helps prevent wheel slippage or spin, extending the life of your tires," explained Ruderman. "The WA475 also has independent work equipment controls, so regardless of whether the operator is in neutral, stopped or operating at full speed, you have full power, speed and flow to your work equipment. The machine also includes an auto-dig feature, which automatically lifts the bucket when an operator enters a pile to provide a full bucket every cycle."

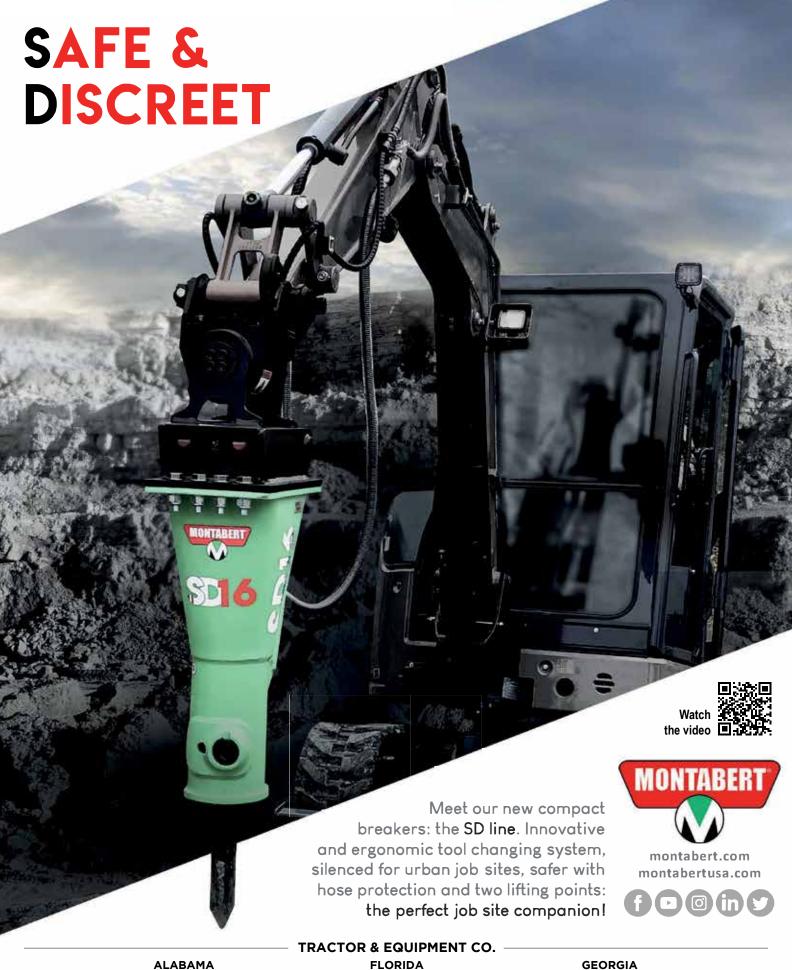


NDA expo attendees interact in front of a Komatsu WA475-10 WH wheel loader with a waste package. "With à la carte quarding options, the WA475-10 WH can be customized and used for any number of applications, such as aggregates, waste handling or scrap handling," said Scott Ruderman, Product Marketing Manager, Komatsu.

Ruderman added, "It's an ergonomic cab very comfortable, very spacious, and great visibility. It's very important to help protect the operator's ears, and the nice, quiet cab can help keep operators happy." ■



Watch the videos



Alabaster Anniston Birmingham

Decatur Dothan Huntsville Mobile Montgomery Tuscaloosa

Panama City Pensacola Albany Augusta Calhoun Columbus Forest Park Hoschton

Kennesaw Macon Savannah

Komatsu's new C144 harvester head, grapple line improve performance with increased reliability for great productivity

For success on forestry projects, your equipment needs to be highly productive and reliable. Komatsu's upgraded C144 harvester head and new grapple range can help deliver both.

The C144 features a new valve bank with a longer service life than its predecessor (verified through testing). Its resilience against wear boosts the reliability of the harvester head and contributes to more uptime and reduced repair costs. To save fuel, the new valve bank lowers energy losses due to decreased hydraulic resistance in the valve block.

An increased feed rate on the smaller feed roller motor from approximately 16 feet per second to 21 feet per second helps deliver greater production and profitability. The design of the saw box has been improved to simplify maintenance and increase reliability.

Better stem holding performance during felling is another improvement. It comes from inverting the direction of the oil flow in the feed system. Test operators who tried the new C144 said that they got more response

Longer service life

To help save time, Komatsu's new grapple range encompasses 10 completely redesigned models with larger openings that offer better wood pile penetration and make it easier for the logs to roll into the grapple. They have also been refined for gathering and straightening timber.

In addition to new features, the grapples retain the key advantages of the previous models such as a robust, durable design. Several improvements on the new grapples contribute to a longer service life, ensuring durability in demanding forest environments.

New models range from the G82, which holds 0.85 square feet, to the G87H, which holds 1.64 square feet. The range is divided into standard, bioenergy (brushwood) and heavy-duty applications. All are compatible with the most common forwarders, as well as most types of truck cranes and other vehicles that handle timber.





Komatsu's upgraded C144 harvester head





Log in to your My Komatsu account to see the full range of new features. Don't have a My Komatsu account? Go to mykomatsu.komatsu to sign up.



OSHA reports large rise in trench-related fatalities, announces enhanced enforcement and oversight

The Occupational Safety and Health Administration (OSHA) reported that nearly 40 deaths occurred in trenching and excavation work during 2022, making it one of the deadliest years on record. The total more than doubled the 15 fatalities reported in 2021.

OSHA reported 22 deaths in the first half of 2022, prompting it to launch enforcement initiatives to protect workers from known industry hazards. Compliance officers from OSHA were sent to perform more than 1,000 trench inspections nationwide.

"The Occupational Safety and Health
Administration is calling on all employers
engaged in trenching and excavation activities
to act immediately to ensure that required
protections are fully in place every single time
their employees step down into or work near a
trench," said OSHA Assistant Secretary Doug
Parker. "In a matter of seconds, workers can
be crushed and buried under thousands of
pounds of soil and rocks in an unsafe trench.
The alarming increase in the number of workers
needlessly dying and suffering serious injuries
in trenching accidents must be stopped."

OSHA reminded companies and workers that trenching and excavation operations require protective systems and inspections before workers can enter. Those requirements

apply to trenches 5 feet or deeper unless they are made entirely in stable rock. Safe access and egress, including ladders, steps, ramps or other safe means, are required for employees working in trench excavations 4 feet or deeper, and they must be located

within 25 feet of all workers.

When designing a protective system, you must consider factors such as soil classification, depth of cut, water content of the soil, changes caused by weather or climate, surcharge loads, and other operations in the vicinity.

Protective systems include:

- Benching: Protecting workers from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels; this method cannot be done in Type C soil
- Sloping: Cutting back the trench wall at an angle inclined away from the excavation
- Shoring: Installing aluminum hydraulic or other types of supports to prevent soil movement and cave-ins
- Shielding: Protecting workers by using trench boxes or other types of supports to prevent soil cave-ins

"OSHA stands ready to assist any employer who needs help to comply with our trenching and excavation requirements," Parker said. "We will conduct outreach programs — including safety summits — in all of our 10 regions to help ensure any employer who wants assistance gets it. The stakes are too important."



Presorted

