

PUSHINGAHEAD

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MORE INTELLIGENT DOZING

Komatsu's new D39i-24 dozers lower fuel consumption and increase production time with no cables



A MESSAGE FROM THE PRESIDENT



Ronald Zagami

We share your goals of high production and efficiency

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Dear Valued Customer:

High production and efficiency are your goals, and Komatsu shares those goals. That's why it continues to manufacture quality products that meet or exceed emissions standards while maintaining, or even boosting, your production and efficiency.

In this issue of your Clairemont Pushing Ahead magazine, you can read about innovative Komatsu products that raise the bar when it comes to increasing your uptime and material movement, while lowering your owning and operating costs. At its recent Demo Days, Komatsu introduced its new *intelligent* Machine Control (iMC) PC490LCi-11 excavator. It is the world's largest excavator with integrated control function and was modeled after Komatsu's iMC PC210LCi-10 excavator, which was the first of its kind. More about the PC490LCi-11 will be released soon.

Komatsu introduced the PC210LCi-10 early last year. It followed several models of iMC dozers that Komatsu began rolling out a few years ago, which feature factory-integrated GPS technology that gives operators automatic blade control from rough-cut to finish grade. You can read about the most recent iMC dozer, the D39i-24, in this issue, along with articles on the new PC30MR-5 and PC35MR-5 excavators and the 931 harvester, the flagship machine of Komatsu's new forestry family.

All Tier 4 Final construction-sized machines are backed by Komatsu CARE, which covers scheduled maintenance for the first three years or 2,000 hours. Our trained technicians perform the work at locations and times convenient for you. We track the machines through KOMTRAX and contact you when it's time to schedule service. Our aim is to minimize or avoid disruption to your production.

Whether it's Komatsu or another brand we carry, we have maintenance plans available to take care of all your machinery. We can also work on your competitive equipment. Talk to your product support representative or your branch service manager to see how we can help.

If there's anything we can do for you, please call or stop by one of our branch locations.

Sincerely,
CLAIREMONT EQUIPMENT COMPANY

Ronald Zagami, President



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ENNISS INC.

Read about this longtime San Diego family business, which specializes in material supply and industrial lot development.

GUEST OPINION

Find out why LIUNA General President Terry O'Sullivan thinks that rebuilding the nation's water infrastructure can boost the economy and give Americans an A⁺ water system.

INDUSTRY OUTLOOK

The recent drinking-water crisis in Flint, Michigan, points to larger potential problems in the nation's underground infrastructure. Read why inside.

DEMO DAYS

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PRODUCT IMPROVEMENT

Learn how Komatsu's new D39i-24 *intelligent* Machine Control dozers increase production time and lower fuel consumption.

NEW PRODUCT

Take a look at how Komatsu's new PC30MR-5 and PC35MR-5 hydraulic excavators pack serious production into a compact frame.

SPECIAL RECOGNITION

Komatsu CARE, the complimentary maintenance program, celebrated its 60,000th service interval in late March. Read about it inside.

KOMATSU & YOU

Meet General Manager of Ripley, Tennessee, Parts Operation Abe Riddle and see how his team makes sure customers get the parts they need.

FORESTRY NEWS

See why the Komatsu 931 harvester defines the next generation of forestry machinery with a host of productive features.

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ENNISS INC.

This longtime San Diego family business specializes in material supply and industrial lot development

The Enniss family has been involved in the San Diego-area construction industry for more than 60 years. Reid Enniss and his wife, Delpha, started a steel fabrication company in 1961. Through the years, Enniss Inc. has done a wide variety of work - from crane and steel erection (including working on many of the high-rises that dominate the San Diego skyline) to demolition, site work, utilities, trucking and material supply.

Although Reid and Delpha have passed away, Enniss Inc. remains a family-owned and -operated business.

"All of my brothers and sisters have been involved with the business for as long as any of us can remember," said Blake Enniss, who serves as Vice President. "My first paid job was here when I was eight years old. My brother and I worked an entire summer, and our folks bought us a horse – that was our pay. We thought it was a pretty good deal."

(L-R) Blake Enniss, Kelly Kufa, Carolyn Sandoval, Eric Enniss, Wade Enniss and Blake's dog, Cali, work together to carry on the family-owned legacy of Enniss Inc.



Based in the San Diego suburb of Lakeside, the Enniss family owns nearly 110 acres of land that is the source for most of its current business activities. Today, the company's primary focus is material supply, including construction and demolition (C&D) debris, landfill and recycling.

"Regarding fill and waste material, we're a one-stop-shop for area contractors," Blake explained. "We mine topsoil and sand, which we sell to contractors. We accept C&D debris from contractors and recycle as much of it as we can. We also have several processing plants in our yard. We crush the rock and concrete that we receive and sell the finished product as fill material. We crush asphalt to be re-used as a base for capping roads. Material that we accept but cannot process and recycle, such as dirt and clay, we use as part of our reclamation efforts. Contractors bring it here to get rid of it because we're cheaper than county landfills. We use it to fill the holes created from the mining of sand. As part of the reclamation, we water and compact that material, then cover it.

"All of the aspects of our business are intertwined – from mining the material; to accepting, processing and recycling the construction waste; to reclaiming the land," he added. "We're also in the process of developing the reclaimed land into industrial lots. So we have a full-circle business."

Location and customer satisfaction

About 35 people work at Enniss Inc. The company considers its primary territory as San Diego County, from the Mexican border north to Oceanside and east to Alpine.

"We're in a good location, and the vast majority of our customers are usually within



Many people contribute to the success of Enniss Inc. (L-R) Ken Birch of Clairemont Equipment, Harold Martinez, Pete Vukov, Travis Rockwell, Bill Clonts, Jeff Vey, Al Kish of Clairemont Equipment, Eric Enniss, Wade Enniss, Blake Enniss, Russell Chadwell, Nevada Gallo, Jimmy Dickerson, Mike Lindsten, Michael Landry, Matt Hahn and Cali (front) make up the Enniss Inc. team.

a 50-mile radius of our facility in Lakeside," said Blake. "I would guess that about every contractor within that area has been into our place, either purchasing or dumping material. They often do both at the same time – drop off a load of waste and pick up a load of finished material to take back to their jobs.

"Our calling card is to provide outstanding service every time," he added. "We want our customers to come back, so we treat them well, get them in and out quickly and keep the dumping fee reasonable. As a result, we have a lot of regular contractor customers."

A very good team

To provide the type of service that keeps customers coming back, Enniss Inc. relies on family and a solid core of longtime employees.

All six Enniss children grew up working in the company and now oversee activities. Sisters Carolyn Sandoval and Kelly Kufa take care of the office, billing and financial side of the business; brothers Blake, Wade and Eric Enniss handle field operations. A fourth brother, Chad, also worked at Enniss Inc. until suffering a stroke a few years ago. Aunt, D. Miller, has worked with the family since the early 1970s. She is always the first person to arrive at work in the morning and acts as the Corporate Secretary/Treasurer. Non-family member David Von Behren is Corporate President, but his involvement in the business at this time is mostly as an advisor.

"As family members, we all have our own specialties that we oversee," said Blake. "We also have a group of veteran employees who we count on to do a great job for us and our customers. They are experienced and talented people who've been with us many years – like Jeff Vey, who handles our plant and materials production, as well as Jimmy Dickerson and Russell Chadwell, who run the steel fabrication shop. It takes everybody working together as a team to be successful in this day and age, and we think we have a very good team."

Komatsu and Clairemont – the whole package

Enniss Inc. turns primarily to Komatsu machines from Clairemont Equipment Company to run its wide-ranging operations. Enniss Inc. owns four Komatsu WA500 wheel loaders, including two new Dash-8 models; an *intelligent* Machine Control (iMC) D61PXi dozer; an iMC PC210LCi excavator; and two older units – a PC200 excavator and a WD600 wheel dozer.

"We use the wheel loaders for processing – feeding the crushing and screening plants and loading out finished product," Blake explained. "We also use them to carry base material to cap the industrial lots we're building. The dozer does all of our finish grading. The iMC excavator is for a special project we have coming up – a half-mile Redi-Rock wall with a sloped bank."

Continued . . .

Enniss on Clairemont: They're straight shooters

. . . continued

Historically, Enniss Inc. has run a mixed fleet of equipment, but going forward, Blake says the company will be buying Komatsu.

"We're very happy with our new Komatsu units. The WA500s are workhorses – reliable and productive. The iMC dozer is awesome. We cut subgrade and do finish grade with it, and we use it to grade our industrial pads to within a quarter-inch. With the integrated GPS, we're able to complete jobs much faster than we could with stakes and laser grading. There's no guesswork with the D61PXi, and anybody can do it. It makes an inexperienced operator an expert. It's an amazing machine."

In addition to the equipment itself, Blake says he appreciates working with Clairemont Equipment Company.

"Before we bought this last group of machines, we did a demo with all the major brands and actually used a report card to score them. All of our operators loved the Komatsu machines, but what really sold us was Clairemont and our Sales Rep, Al Kish. It seems like everybody else came in with a highball price, then wanted to haggle. Al and Clairemont gave us their best price right from the start – and that was it. We respect that, plus

they had great terms on a three-year, year-to-year lease. In the end, it was a pretty easy decision.

"Clairemont is the whole package – great equipment and excellent support, and they're straight shooters," he added. "We've worked with them in the past and are very comfortable with the relationship."

Future includes more development

Looking to the future, Blake expects Enniss Inc. to take on additional development work.

"With more than a hundred acres of land here in Lakeside, we expect to be developing a great deal in the years to come – with the plan being to lease the lots for industrial use. Of course, we'll also continue to do the recycling and aggregate production that we've done for many years, and we have a steel fabrication shop and a trucking company, so we'll still have a lot of irons in the fire.

"We feel good about what we're doing and our plan going forward," he added. "As always, the key in business is keeping your customers happy. As long as we are able to do that on both the material supply and development sides, I'm optimistic about what the future holds for Enniss Inc."

Komatsu WA500 wheel loaders like this one, which is working at the company's Lakeside, California, location have been a big hit with Enniss Inc. "The WA500s are workhorses – reliable and productive," said Vice President Blake Enniss.



TIME TO ACT

Rebuilding neglected systems would boost economy, give Americans an A⁺ water infrastructure

Our country must do better than "nearly failing" when it comes to something so vital and fundamental as water. Yet a D+ is our nation's water infrastructure grade from the American Society of Civil Engineers (ASCE). It has taken the lead-contamination scandal in Flint, Michigan, to get the attention of Congress and elected officials across the nation, but Flint is only the tip of the iceberg.

News reports now say as many as 2,000 water systems across the country may have excessive lead levels, while as many as 10 million homes receive water through lead pipes. Across the nation, many pipes are more than 100 years old, some dating back to the Civil War era, posing drinking water risks. Each year, according to ASCE, there are 240,000 water-main breaks. Faulty pipes result in the leakage of 900 billion gallons of wastewater a year, helping to make 28 percent of waterways unfit for human recreation and 18 percent unfit for consumption. According to ASCE, the cost to fix our nation's abuse of water resources is now \$1.7 trillion – and rising.

From drinking-water contamination, to water scarcity, to ports and waterways that can no longer accommodate commerce, the water crisis is one of the most critical issues facing the U.S. As Flint shows, the crisis raises moral questions, but there are major economic costs as well. Across the country, neglect of inland waterways and the associated stunting of water transportation activity could hit the economy with the loss of 738,000 jobs by 2020, a nearly \$750 billion blow to the economy, according to ASCE.

America can do better than a D⁺. This year, Congress is likely to consider a number of water-infrastructure measures to increase funding for clean and safe drinking water, ranging from reauthorization of the Water Resources Reform and Development Act (WRRDA) to bills aimed at alleviating the drought in the West. However, we must caution Congress against "robbing Peter to pay Paul." For the sake of our children in every community, the drinking-water crisis must receive additional, significant and dedicated resources above and apart from WRRDA. That piece of legislation is simply not capable of addressing the crisis, and attempting to use it for that purpose will only strain other critical water resources.

There is no excuse for Congress failing to act. The challenge is enormous, but the rewards can be equally as great. The men and women of the Laborers' International Union of North America are ready to fight to protect lives, and we're ready to get to work doing our job to rebuild America's neglected water infrastructure. Now it's up to Congress and elected officials at every level to do their jobs to ensure that our country and our people have what they deserve: an A+ water infrastructure.



Terry O'Sullivan, General President, LIUNA

Terry O'Sullivan is General President of the Laborers' International Union of North America, which represents a half-million men and women predominantly in the construction industry.

Laborers' International Union of North America General President Terry O'Sullivan says it's unacceptable for the U.S. to have a D⁺-rated water infrastructure. His organization is pushing Congress to reauthorize the Water Resources Reform and Development Act and provide additional funding to modernize the nation's water systems.



WATER, WATER EVERYWHERE

Flint's crisis points to larger potential problems in the nation's underground infrastructure

The water crisis in Flint, Michigan, may only be the tip of the proverbial iceberg when it comes to failing systems that carry the nation's drinking water and other critical utilities. Several factors figured into the crisis, including the use of old lead pipes that brought water from the Flint River, through a water treatment plant and eventually into residences.

Failure to treat the water properly caused pipes to corrode and to leach lead and heavy metal. The harmful materials made their way into homes, causing health problems that could plague Flint for a very long time. Efforts are underway to assess and eventually fix Flint's issues, including switching the city back to its original water source, Lake Michigan, and replacing all lead service lines leading to homes. The first

PVC Pipe Association's WaterMainBreakClock.com notes that corrosion of old lead and other metal pipes eventually contributes to failures. The association estimates that leaking pipes lose more than 2.6 trillion gallons of drinking water every year, or 17 percent of all water pumped in the United States.



lead-to-copper line replacement was recently completed, but replacing all lines could take years.

Although Flint's crisis is an isolated incident, a problem with the nation's drinking water and other utility lines isn't. Corrosion is a leading cause, but aging pipes and overtaxed systems may be to blame as well.

A break every two minutes

The American Society of Civil Engineers says that a water main breaks every two minutes in the United States. The same group has graded the country's infrastructure a D^+ . Estimates show that as much as 44 percent of the nation's water infrastructure is approaching or past its useful life, and that about 1.7 trillion gallons of water are wasted each year.

"We have a buried problem that no one sees," said Terry Leeds, Director of Kansas City Water Services and a board member of the National Association of Clean Water Agencies in a recent Kansas City Star article. "Infrastructure has a life span, and now we're seeing a lot of cities are facing the end of it."

That article, "Here's why Flint's water problem isn't likely to happen in Kansas City," highlights what the Missouri city is doing to combat an aging system that saw more than 1,850 water-main breaks in 2012. It began a program to replace 28 miles of pipe per year. Many of the old lines were made of cheap metal and installed during and after World War II. Other cities are facing the same scenario of outdated systems.

A hefty price tag

The PVC Pipe Association sponsors WaterMainBreakClock.com, a website that tracks the costs associated with aging pipes throughout the country. It shows that about 850 water-main



PVC and concrete pipe is an alternative to lead and other metal service lines that are subject to corrosion. Kansas City created a program to replace 28 miles of pipe each year after suffering more than 1,850 water-main breaks in 2012. Most of Kansas City's existing infrastructure was made of cheap metal and installed during and after World War II.

breaks occur each day in the United States. Since 2000, there have been more than 5 million breaks. Corrosion costs more than \$50 billion annually; that's about \$652 billion over the past 15 years.

The website notes that corrosion of old lead and other metal pipes eventually contributes to failures, and the costs are not just associated with repairing and replacing those lines. Leaking pipes lose more than 2.6 trillion gallons of drinking water every year, or 17 percent of all water pumped in the United States. This represents \$4.1 billion in wasted electricity annually.

"Corrosion is a significant drag on the economy," the site claims. "Not only is this cost calculated in terms of water-main-break repair, but also in terms of lost water, replacement of corroded pipes and implementation of corrosion-mitigation measures, which are ineffective since they only delay an unavoidable outcome."

An Environmental Protection Agency (EPA) survey shows that \$271 billion is needed throughout the next five years to maintain and improve the nation's wastewater infrastructure. It

has also said it will cost \$385 billion in the next 15 to 20 years. Those figures include pipes that carry wastewater to treatment plants, the technology that treats water and methods of managing stormwater runoff. The EPA also calls for the investment of hundreds of millions of dollars in treatment plants, many of which are several decades old.

"The only way to have clean and reliable water is to have infrastructure that is up to the task," said Joel Beauvais, the EPA's Acting Deputy Assistant Administrator for Water, in a Construction Equipment article. "Our nation has made tremendous progress in modernizing our treatment plants and pipes in recent decades, but this survey tells us that a great deal of work remains."

Many believe the price tag could be much higher. The American Water Works Association, for example, claims that \$1 trillion is needed to replace outdated pipes and meet growth during the next 25 years.

"The future is looking a little dark for something as basic and fundamental as water,"

Continued . . .

Infrastructure solutions necessary, but costly

said Adam Krantz of the Water Infrastructure Network (WIN) in a San Angelo (Texas) Standard Times article. WIN is a broad-based coalition of local elected officials, drinking water and wastewater providers, state environmental and health administrators, engineers, and others dedicated to preserving and protecting the health, environmental and economic gains that America's drinking water and wastewater infrastructure provides, according to the organization.

Could your rates rise?

WIN and other groups are pushing Congress to invest more. Federal funding comes from the Drinking Water State Revolving Fund that offers loans to help cities and towns get needed dollars. Cities and towns also rely on taxes, but many fall short of raising enough money to pay for needed upgrades and repairs. More efficient faucets, shower heads and other plumbing systems have made revenue shortfalls worse. Population loss, which reduces taxes, also plays a role in municipalities. That's forcing some local governments to raise rates.

understand: If they want this system, they are going to have to be willing to finance it," said

"That's the key that Americans have to

Greg DiLoreto, Past President of the American Society of Civil Engineers in the Times article.

Fitch Ratings, a nationally recognized statistical rating organization, said that in light of the Flint crisis, if the EPA strengthens its Lead and Copper Rule - which is used to regulate drinking-water exposure to lead - the removal of all lead service lines could be mandatory. That would be an expensive proposition.

"Reprioritizing and accelerating the lead pipe replacement would add significant capital needs to the sector and could compete with other critical infrastructure projects, including developing sufficient long-term water supplies and replacing aging infrastructure components other than lead lines," said Fitch in a March press release. "Some sources estimate more than 6 million lead service lines exist across the U.S. We believe the capital costs to replace these lines could exceed \$275 billion. The EPA's latest survey estimated the entire sector needs \$385 billion in water infrastructure improvements through 2030, and this estimate includes the costs to only partially replace lead pipes. Either level of capital cost would likely be manageable for the sector as a whole if it is spread throughout a time frame like the one in the EPA survey. However, implementation across a shorter time span may create stress for individual credits."

Representatives on both sides of the aisle in Congress have called for establishing a National Infrastructure Development Bank to help pay for the costs associated with projects such as roads, bridges and water systems that are critical to Americans, but no bill passed. A recent push came again in February from U.S. Rep. Rosa DeLauro (D-Conn.), who has introduced an act in every Congress since 1994 to create an infrastructure bank.

"Emergencies like the tragedy we are seeing in Flint are a stark reminder of what is at stake when it comes to investment in water projects," said DeLauro in a commentary on TheHill.com. "We cannot continue the pattern of turning attention to critical infrastructure only when disaster strikes - we must make long-term, pro-growth investments to prevent further tragedies from ever occurring." ■

The American Society of Civil Engineers says that a water main breaks every two minutes in the United States. The same group has graded the country's infrastructure a D+.

TAKING A RIDE INTO THE FUTURE

Customers test Komatsu equipment, including the new PC490LCi-11 excavator, at spring Demo Days

Nearly 230 current and prospective customers attended Komatsu's spring Demo Days at its Training and Demonstration Center in Cartersville, Georgia, in February. The three-day event opened with a single-day record number of attendees. Those in attendance got an early look at the latest additions to the Komatsu *intelligent* Machine Control (iMC) line – the PC490LCi-11 excavator and the D155AXi-8 remote-control dozer.

"Demo Days is a great opportunity for customers to come and operate our machines and get a first-hand feel for them," said Komatsu Director of Marketing Communications Bob Post. "While the event served as a debut for the PC490LCi and the D155AXi with remote control, our other Tier 4 machines that were featured were also a big hit."

Komatsu had 31 machines available for operation at Demo Days. In addition to the highly anticipated PC490LCi-11 – the world's largest excavator with integrated GPS technology – several iMC products were also on display, including three PC210LCi-10 excavators and D51PXi-23, D61PXi-23 and D65PXi-18 dozers.

The line up also featured six wheel loaders (sizes WA200-7 to WA600-8), four dozers (sizes D39PX-24 to D85EX-18), multiple excavators (sizes PC88MR-10 to PC490LC-11), an HM400-5 articulated truck, an HD605-7 mechanical truck and a GD655-6 motor grader.

During the event, attendees had the option of touring Komatsu's Chattanooga Manufacturing Operations Center in Tennessee or attending morning information sessions at the Training and Demonstration Center in Cartersville. The sessions included

"Bottom Line Tactics" and a tire-management class. Presentations covering Komatsu's iMC products and Komatsu Financial followed a catered lunch. After a short safety video and product demonstration, guests had the opportunity to operate machines.





Bob Post, Komatsu Director of Marketing Communications

Attendees tour Komatsu's Chattanooga Manufacturing Operations Center in Chattanooga, Tennessee.



Komatsu had 31 machines available for demonstration at its Demo Days in Cartersville, Georgia, February 23-25.

Komatsu's latest *intelligent* Machine Control excavator, the PC490LCi-11, was the main attraction at Demo Days. It is the world's largest GPS-integrated excavator on the market.



D61PXi-23



PUSHING AHEAD WITH *INTELLIGENT* MACHINE CONTROL

- Automated operation from rough dozing to finish grade
- intelligent Machine Control dozing mode and load control features
- No cables between machine and blade
- · A factory-installed integrated system

KOMATSI

1 AM KOMATSU

CODY GASTON / KOMATSU DOZER DESIGN ENGINEER / CHATTANOOGA, TN

"I'm proud that our Komatsu dozer designs are always breaking new ground, like our forward cab small dozers and now our *intelligent* Machine Control equipment with integrated technology. But it's a team effort and it takes dedicated team members to build in the quality it takes to meet our customers' demands. And that's why I AM KOMATSU."

MADE WITH PASSION AND PRIDE

KOMATSU®

MORE INTELLIGENT DOZING

Komatsu's new D39i-24 dozers lower fuel consumption and increase production time with no cables

Eliminating the need to install and remove blade-mounted sensors each day saves on machine and operator wear and tear, and it converts potential downtime into increased production. Komatsu's second-generation D39PXi-24 and D39EXi-24 dozers offer that and more with a new Tier 4 Final engine that increases fuel efficiency compared to its predecessor.

"With factory integration and a host of intelligent capabilities, the more that owners run their D39i-24 dozers, the more they save," said Jason Anetsberger, Komatsu Senior Product Manager. "The monthly production gains from starting sooner, finishing faster, using less fuel and saving on materials can add up quickly. Skipping the cables, climbing and connections of traditional aftermarket systems saves operators up to 30 minutes a day and is more convenient."

Rough-cut to final grade, the *intelligent* Machine Control (iMC) dozers extend production gains. Once engaged, the system automatically starts the cut and lowers the blade to grade in a typical dozing pass. If the load increases to maximum capacity, the blade automatically raises to minimize track slip, ensuring productive dozing. This allows the dozer to achieve up to 8-percent-greater efficiency in moving materials, based on start-to-finish grade testing against typical aftermarket machine-control systems.

New features

Customer feedback led Komatsu to introduce a standard, operator-selectable, automatic Reverse Grading Mode, which enables automatic blade control while reversing, to grade the target surface. Other new features include a Triple Labyrinth final-drive design that provides additional protection for the final drive floating seals.

The more-efficient engine uses a Selective Catalytic Reduction System and Diesel Exhaust Fluid, as well as a new, water-cooled, Variable Flow Turbocharger that improves durability and engine response. The Diesel Oxidation Catalyst provides 100-percent passive regeneration that does not interfere with operation. Auto-idle shutdown helps reduce idle time and saves fuel.

"These dozers are great for everything from stripping to finish grading on a variety of small-to-medium-sized jobsites, such as commercial buildings and residential lots," said Anetsberger. "As with all Tier 4 construction machines, they are covered under the Komatsu CARE program."

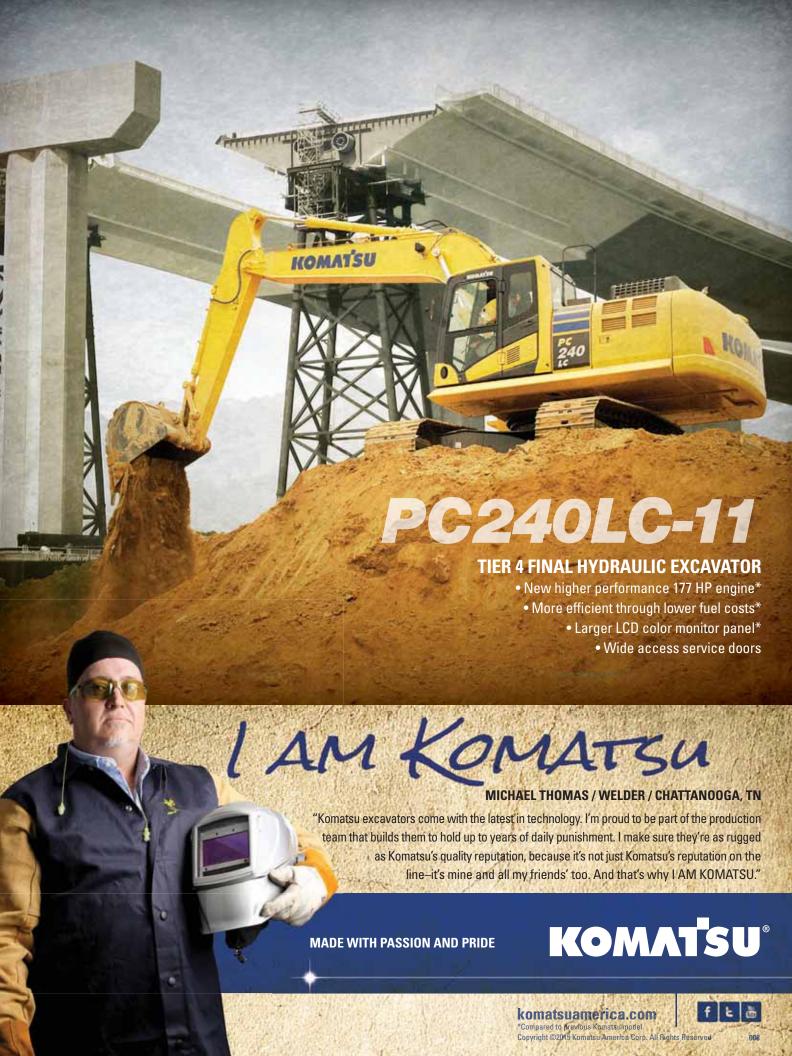


Jason Anetsberger, Komatsu Senior Product Manager

Quick Specs on Komatsu's D39PXi-24 and D39EXi-24 DozersModelNet HorsepowerOperating WeightBlade CapacityD39EXi-24105 hp21,848 lbs2.89 cu ydD39PXi-24105 hp22,774 lbs3.14 cu yd

Komatsu's new D39EXi-24 and D39PXi-24 dozers lower fuel consumption with a Tier 4 Final engine. They also increase production with integrated machine control that eliminates the time needed to install and remove cables.





SMALL PACKAGE, BIG RESULTS

Komatsu's new PC30MR-5 and PC35MR-5 hydraulic excavators pack serious production into compact frame

Contractors looking for a versatile excavator with a smaller footprint are in luck. Komatsu's new PC30MR-5 and PC35MR-5 utility-sized excavators are a perfect fit for tight worksites.

The new models have a swing-boom design that enables them to easily complete jobs in confined spaces. The excavators are each equipped with a standard dozer blade to help with backfilling and enhanced work modes to help operators match engine speed and pump delivery to the application.

"The swing-boom design allows the machines to dig close to foundations or alongside buildings," said Komatsu Product Marketing Manager Des Jarvis. "The PC30 and PC35's standard dozer blade makes backfilling a breeze and eliminates the need for a second machine."

The excavators come with a Tier 4 Final, 24-horsepower engine and an Exhaust Gas Recirculation Valve to meet emissions standards. They feature a new auto decelerator, auto-idle-shutdown and economy modes to help reduce idle time and save fuel. Additionally, a dial-type knob offers finer throttle control. The excavators are available in three track options – rubber, steel or roadliner – to further their worksite versatility.

Upgraded comfort

Both the PC30 and PC35 feature an updated cab to provide a durable and secure work environment. The ROPS cab and two-post canopy come equipped with a 3.5-inch, high-resolution LCD screen and Ecology Guidance to help

operators monitor machine-performance metrics and maximize fuel efficiency.

Komatsu improved visibility and functionality inside the cab through several enhancements, including a swing-open hinge door. The cab has a flat rear window to increase visibility and reduce replacement costs. The two-post ROPS canopy is designed with no front posts, which can distract the operator.



Des Jarvis, Komatsu Product Marketing Manager

Daily maintenance and service is easier on the excavators, as both the PC30 and PC35 have wide service doors for access to ground-level maintenance. The addition of a swing-up operator platform increases accessibility to all components.

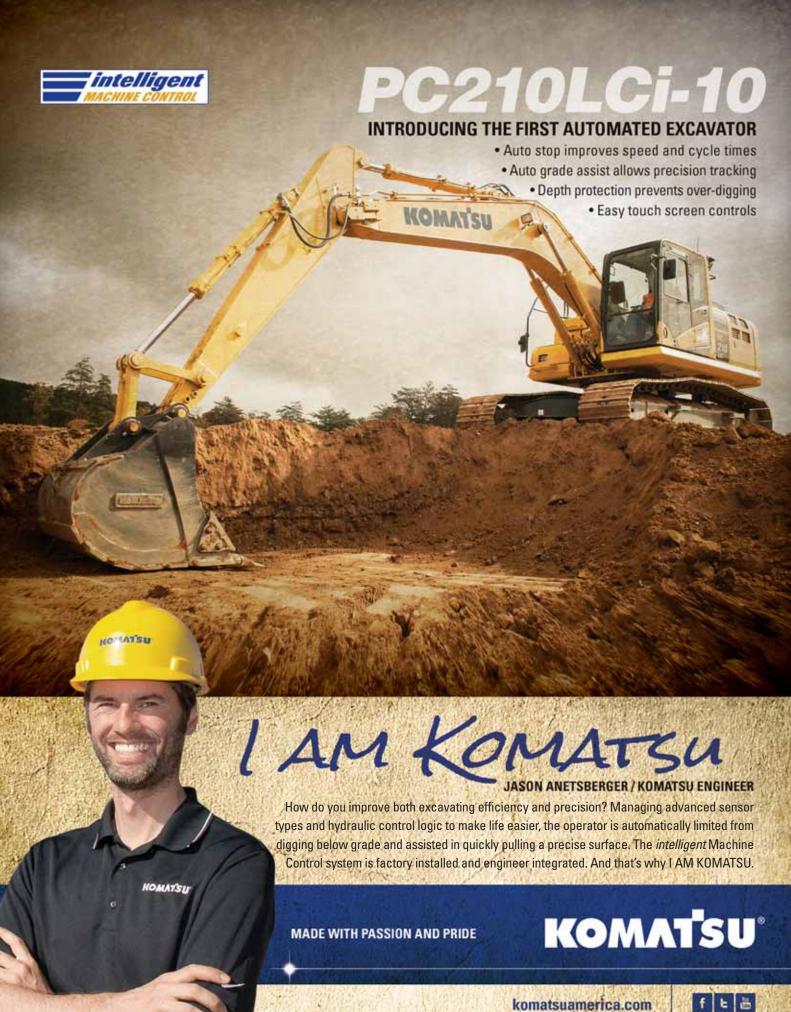
Komatsu designed the PC30MR-5 and PC35MR-5 excavators for tight worksites. The new models have a swing-boom design that

enables them to easily work in confined spaces.



*with ca

Quick Specs on Komatsu's PC30MR-5, PC35MR-5 Excavators			
Model	Net Horsepower	Operating Weight*	Bucket Capacity
PC30MR-5	24.4 hp	6,836 lbs	.0721 cu yd
PC35MR-5	24.4 hp	8,324 lbs	.0724 cu yd



TURNING 60,000

Komatsu CARE program celebrates milestone service interval

Komatsu launched Komatsu CARE in 2011 with one goal in mind: demonstrate the company's commitment to delivering quality parts and reliable service in a manner that ensures a customer's machine performance is never compromised. That goal has been accomplished – 60,000 times. Columbus Equipment Company (CEC), the Komatsu distributor in Ohio, performed the 60,000th Komatsu CARE service interval on a D61EXi-23 dozer for Eramo & Sons in late March.

"We're very honored to participate in Komatsu CARE and to have completed the 60,000th service," said CEC President Josh Stivison. "We're also proud to conduct the service for Eramo & Sons, a company we have a rich history with."

CEC completed the milestone service interval during a ceremony at its Columbus, Ohio, facility and presented Eramo & Sons with a certificate to celebrate the event.

"Through Komatsu CARE, we can make sure our customers' Tier 4 machines are maintained properly," said Komatsu Director of Distributor Development Mike Hayes. "Komatsu CARE secures uptime, increases productivity and protects residual values for the machines. It also keeps service technicians familiar with the customer's equipment, which is great for future maintenance. The service is complimentary, and we contact customers to schedule the maintenance at a convenient time and jobsite location. This way, the customers save time and money and can schedule their maintenance downtime."

The Komatsu CARE complimentary maintenance program provides service on Tier 4, construction-sized machines – whether rented, leased or purchased – for the first three years or 2,000 hours of operation. The program includes scheduled factory maintenance, a 50-point inspection at each service interval and two Komatsu

Diesel Particulate Filter exchanges within the first five years. Komatsu distributors monitor the machines and contact owners when a service is due. Then, a Komatsu CARE-certified service technician performs the maintenance.

Today, Komatsu CARE programs are standard on all Tier 4 and Tier 4 Final machines in the United States and Canada. The program has been a huge success with customers, including Eramo & Sons.

"Komatsu CARE saves us a lot of labor," said Eramo & Sons Chief Mechanic Dave Penwell. "It also keeps me more involved with the service department at the distributorship. Overall, it makes my job easier. They take care of everything."

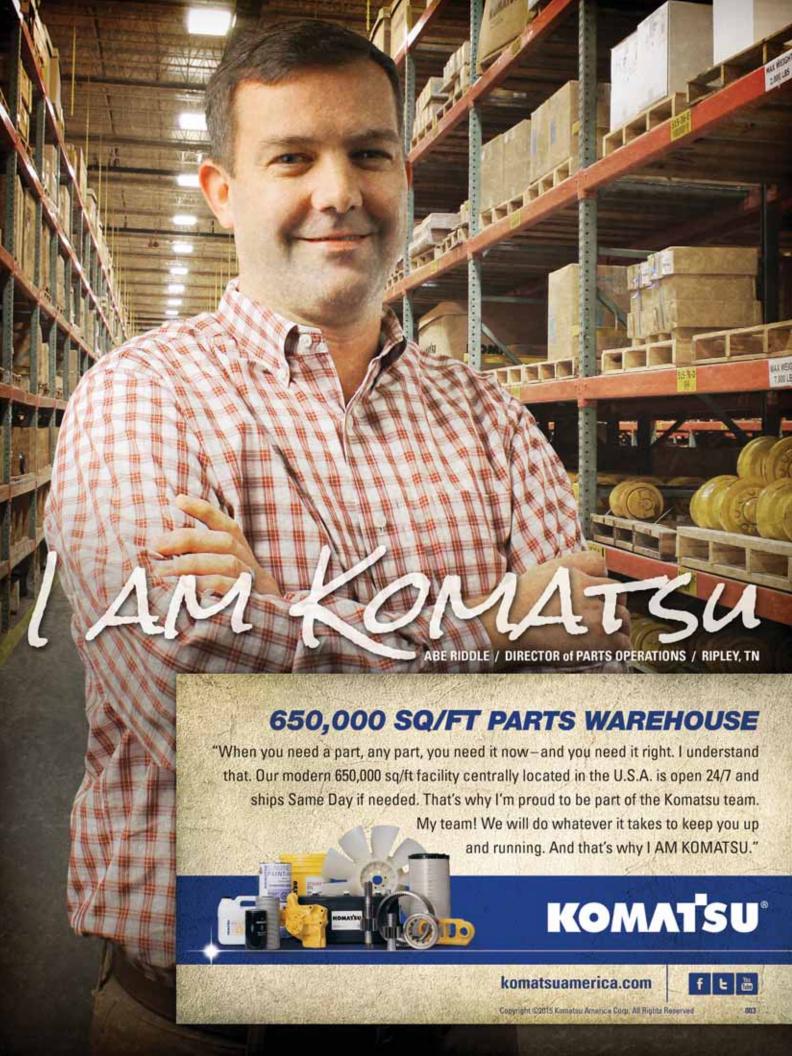
"We began using Komatsu equipment in the 1970s; it was a decision that has served us well," added Chairman Rocky Eramo. "Komatsu makes an excellent product, and our distributor has always been there to help us. Today, we have about 45 Komatsu machines in our fleet. It's been a great partnership."



Mike Hayes, Komatsu Director of Distributor Development

Officials from Komatsu and Columbus Equipment Company (CEC) present Eramo & Sons' representatives with a certificate to celebrate the 60,000th Komatsu CARE service interval. CEC completed the milestone service on Eramo & Sons' D61EXi-23 dozer in late March.





ENSURING YOUR UPTIME

Abe Riddle says the aim of Komatsu's Ripley Parts Operation is timely delivery from its vast inventory

QUESTION: What is the role of Komatsu's Ripley Parts Operation in Tennessee?

ANSWER: It is the central parts warehouse for North America and Latin America, with an emphasis on parts for Komatsu construction, forestry, forklift and industrial press products. We also carry parts for what we call "mining support," which is inventory related to non-electric-drive trucks.

Everything – O-rings, engines, transmissions and some boom-assembly parts – comes through here and is shipped to our distributors or one of our eight regional parts distribution hubs located in the United States and Canada. We serve Komatsu affiliates globally, too, but our primary customer base is in North American and Latin American countries.

Our most important role is ensuring those parts arrive in a timely manner. The Parts Operation Department runs two shifts per day, but we're really a 24/7/365 operation. We have a hotline number (731-635-6120) and staff on-call, so even if customers call during holidays or off hours, we can still process their orders and get them shipped. It's our goal to have most parts orders in customers' hands the same day or the next day.

QUESTION: Why is that important?

ANSWER: When machines are down, customers are losing money. We understand that, so our response is critical. The faster they get the parts, the faster they can be back up and running. Many customers tell me that service after the sale is a huge factor in what brand of equipment they choose, so we obviously place a heavy emphasis on timely parts support.

Continued ...



This is one of a series of articles based on interviews with key people at Komatsu discussing the company's commitment to its customers in the construction and mining industries – and their visions for the future.

Abe Riddle, General Manager, Ripley Parts Operation

Abe Riddle joined Komatsu's Ripley Parts Operation (RPO) in Ripley, Tennessee, 10 years ago in an inventory-planning position. He moved into a continuous-improvement role, then into inventory management. Later, he managed the warehouse.

"Through my progression, I think I have touched every area at some point," said Riddle. "It was good preparation for my current position."

Today, Riddle oversees the Master Parts Distribution Center, helping ensure that inventory levels are appropriate and "that the right part gets to the right place at the right time," according to Riddle.

"Our availability is outstanding at more than 96 percent," said Riddle. "I believe Komatsu has built a strong parts-support network, and I'm proud to be a part of a forward-thinking company that emphasizes continuous improvement to better serve customers."

Riddle started in the manufacturing industry at 18, and earned his undergraduate degree in business from Union University in Jackson, Tennessee, by attending classes at night. After joining Komatsu, he completed an MBA through Union while working at the Master Parts Distribution Center.

Abe and his wife, Stephanie, have three children and enjoy spending time together as a family. He also likes to duck hunt.

Location is key for Ripley Parts Operation in Tennessee

... continued

QUESTION: Why is Ripley, Tennessee, a good location?

ANSWER: We are strategically located close to a major freight hub in Memphis. That allows us to take orders late in the day and still be able to get parts where they need to be early the next day, in most cases. For example, if someone in Washington state places an order at 6 p.m., they will have it around 10 a.m., depending on what they ordered.



QUESTION: How likely is it that you will have the parts on hand that customers need?

ANSWER: Highly likely as we carry about \$560 million in inventory. Our target is 95-percent availability, meaning that when an order is placed, we have what's needed on the shelf and ready to go. Currently we are at 96.4 percent.

QUESTION: How do you know what inventory to have on hand?

ANSWER: There are several factors we take into account. We consider historical demand, and we collaborate with distributors to understand their operations and machine populations. We also use KOMTRAX to monitor data that helps us anticipate future parts needs. In addition, our manufacturing plants give us recommended lists of parts for new machines. All of that information helps us get a strong hold on what we need to build inventory and keep parts stocked at appropriate levels.

QUESTION: What about older machines?

ANSWER: We maintain a good deal of inventory for machines dating back a decade or more, so we likely have the needed parts on hand. If we don't, we can source parts from trusted suppliers. We will do everything we can to make sure customers get what they need.



Komatsu's Ripley Parts Operation (RPO) is the central parts warehouse for North America and Latin America. Its inventory includes items for construction, forestry, industrial press and mining support. It also includes parts for Komatsu forklifts, like the one pictured here, which RPO personnel use at the warehouse.

General Manager, Ripley Parts Operation (RPO), Abe Riddle says the RPO's most important role is ensuring that parts arrive in a timely manner. With nearly 97-percent availability, most orders are filled within 24 hours.



Discover more

A PROVEN WINNER

Komatsu's new 931 harvester defines next generation with a host of productive new features

Demanding logging applications require machines that can withstand the rigors of daily use and consistently deliver high productivity. Komatsu's totally new, four-model harvester family – led by its flagship 931 harvester – is doing just that.

"Our new harvester family was designed from the ground up to set the industry benchmark for productivity, operator comfort and eco-friendliness," said Steve Yolitz, Manager, Marketing Forestry, Komatsu America. "The 931 harvester is our high-volume flagship model in the family."

Komatsu designed the 931 harvester for serious productivity by including the new 3-Pump Hydraulic System (3PS), featuring dual circuits with separate pressure levels. The system is power-regulated against the engine and offers a class-leading working hydraulic flow of 139 gallons per minute (528 liters per minute), which is 68-percent-greater than the prior 931.1 model.

Unique pressure and flow optimization enables operators to work considerably faster without losing hydraulic power. Operators can use multiple functions simultaneously with maximum hydraulic power, such as slewing the crane, feeding a log and maneuvering the machine – all with optimally low fuel consumption.

Performance and productivity are further enhanced with the new H-series parallel crane that has greater lift capacity, 360-degree cab/crane rotation and automatic four-way cab/crane leveling, which keeps the operator on a consistent plane and ensures an unobstructed view of the tree at all times. While a variety of harvesting heads are offered to meet specific applications, the

C144 model is a strong overall performer and serves the broadest market segment. It has a maximum cutting diameter of 28 inches, and the powerful four-wheel-drive feed system generates 6,650 pounds of feed force.

The larger, modern cab increases the front line-of-site visibility by 62-percent upward and 17-percent downward. Operator comfort was enhanced with an automotive-grade fit and finish interior, first-class ergonomics and adjustable hand controls.

The 931 harvester has a new 251-horsepower Tier 4 Final engine that is both powerful and more fuel efficient than prior models. A cold-weather starting system, which heats the batteries, engine coolant, diesel exhaust fluid and hydraulic oil, come standard on the harvester.

"Since the first next-gen harvesters began working in the woods last fall, every indication is that we have achieved our productivity, operator comfort and eco-friendliness goals," stated Yolitz. "The 931 harvester is proving to be an outright winner."



Steve Yolitz, Manager, Marketing Forestry, Komatsu America

The 931 harvester features a new cab, crane, hydraulic system and a new Tier 4 Final engine, which is more fuel efficient than the prior model.



IN THE SPOTLIGHT

Komatsu displays WA500-7 Yard Loader arrangement at record-setting asphalt, aggregate events

The co-located 2016 World of Asphalt Show & Conference and AGG1 Academy & Expo set new attendance records with more than 9,000 people checking out the exhibits inside the Music City Center in Nashville. Komatsu was among the exhibitors, displaying a 353-horsepower WA500-7 Yard Loader arrangement that is designed to load 24-ton on-highway trucks in two passes.

"Loading trucks in fewer passes increases production, and that's just one advantage the WA500-7 Yard Loader arrangement presents," said Rob Warden, Komatsu National Account Manager. "It's great for moving and stockpiling already-processed materials."

The 79,000-pound-plus loader that Komatsu displayed features a 9.8-cubic-yard, flat-floor bucket, which increases capacity and productivity for applications involving re-handled or loose materials. Komatsu added a larger-diameter bucket cylinder to the WA500-7 Yard Loader arrangement for increased bucket forces and additional counterweight for better stability and tipping loads. The counterweight's unique shape provides more ground clearance for stockpiling materials.

The machine has 29-inch rims and low-profile tires for increased stability; front and rear brake-cooling systems, which maximize brake life in extended-carry and high-speed applications; and full rear fenders for enhanced protection from debris and thrown material.

"The WA500-7 Yard Loader arrangement handles loose stone, sand, gravel and other materials very well downstream from a crusher," said Joe Sollitt, Komatsu Product Marketing Manager. "It fits perfectly into the asphalt and aggregate industries."

All 50 states represented

Attendees from every state, nine Canadian provinces and more than 60 other countries made their way to the events, which covered a record 157,000 net square feet of exhibit space. The shows featured more than 500 exhibitors, including 150 new ones.

World of Asphalt and AGG1 will be held again March 6-8, 2018, in Houston. The annual shows will skip next year due to CONEXPO-CON/AGG. ■





PLAYING IN THE SAND

Komatsu, Extreme Sandbox enter partnership aimed at increasing national exposure to construction industry

Komatsu has teamed up with Extreme Sandbox, LLC, a top-rated, heavy-equipment-adventure company, to become its exclusive equipment sponsor. The partnership enables both companies to expose more Americans to the experience of operating heavy equipment.

Extreme Sandbox provides guests with a truly unique opportunity to operate real construction equipment inside a 10-acre "sandbox." Expert instructors help guests learn and operate the machines in a proper operating environment, while creating a fun and memorable experience.

Together, the two companies plan to expand the public's exposure to heavy machinery. By combining Extreme Sandbox's national expansion plans and proven track record of creating memorable experiences, with Komatsu's world-class machines, national reach and global resources, the partnership will introduce a new generation to heavy machinery and an under-explored area for rewarding careers.

"This alliance is an opportunity to transform these impressive marvels of engineering technology from a roadside and work-zone curiosity, to an informative, exciting, hands-on experience," said Rich Smith, Vice President, Product Services Division for Komatsu America. "Long term, we hope climbing inside and feeling the comfort, speed and power of these machines inspires a new generation of men and women who are good with their hands to consider construction careers. The construction industry provides great employment opportunities for future operators, technicians and engineers. The degree to which cutting-edge technology will shape the jobsites and careers in the construction industry of the future is a well-kept secret. We want to change that."

Extreme Sandbox currently has two locations: its Trip-Advisor-No. 1-rated suburban Minneapolis site and its new one about an hour north of Dallas. More sites are planned for several U.S. cities in the next few years. Permanent locations will offer the opportunity to schedule machine and operator training at the high school and community college levels, as well as demonstration and customer appreciation events for local Komatsu distributors.

It will also allow Extreme Sandbox to collaborate with local distributors and embark on periodic road tours that spread the message of a thrilling experience and rewarding careers to local communities across the country, via tailgating events, state fairs, festivals, parades and other avenues.



Rich Smith, Vice President, Product Services Division for Komatsu America



Komatsu teamed up with Extreme Sandbox to become its exclusive equipment sponsor. The partnership enables both companies to expose more Americans to the experience of operating heavy equipment. Extreme Sandbox provides guests with a truly unique opportunity to operate real construction equipment inside a 10-acre "sandbox."

GOOD NEWS, NEW CHALLENGES

Construction unemployment lowest in six years, but shrinking pool of workers could cause future headaches

This article is based on a press release from the Associated General Contractors of America (AGC) regarding its analysis of construction employment. Construction employment reached its highest level in six years, while the number of unemployed workers with construction experience shrank to a 14-year low, according to an Associated General Contractors of America (AGC) analysis. The organization tempered the good news, cautioning that the diminishing pool of available, qualified labor may have an impact on the industry's ability to meet growing demand.

"It is encouraging to see construction employment rising again, but the industry could hire many more workers if they were available," said Ken Simonson, AGC's Chief Economist. "The lack of experienced construction workers may be impeding the industry's ability to start or complete projects. The recent acceleration in construction spending may soon level off unless the sector can draw in more workers with the right skills."

An Associated General Contractors of America (AGC) analysis showed construction employment totaled 6.3 million in July 2015, the most since February 2009, according to AGC Chief Economist Ken Simonson. The organization cautioned that a diminishing pool of available qualified labor may have an impact on the industry's ability to meet growing demand.

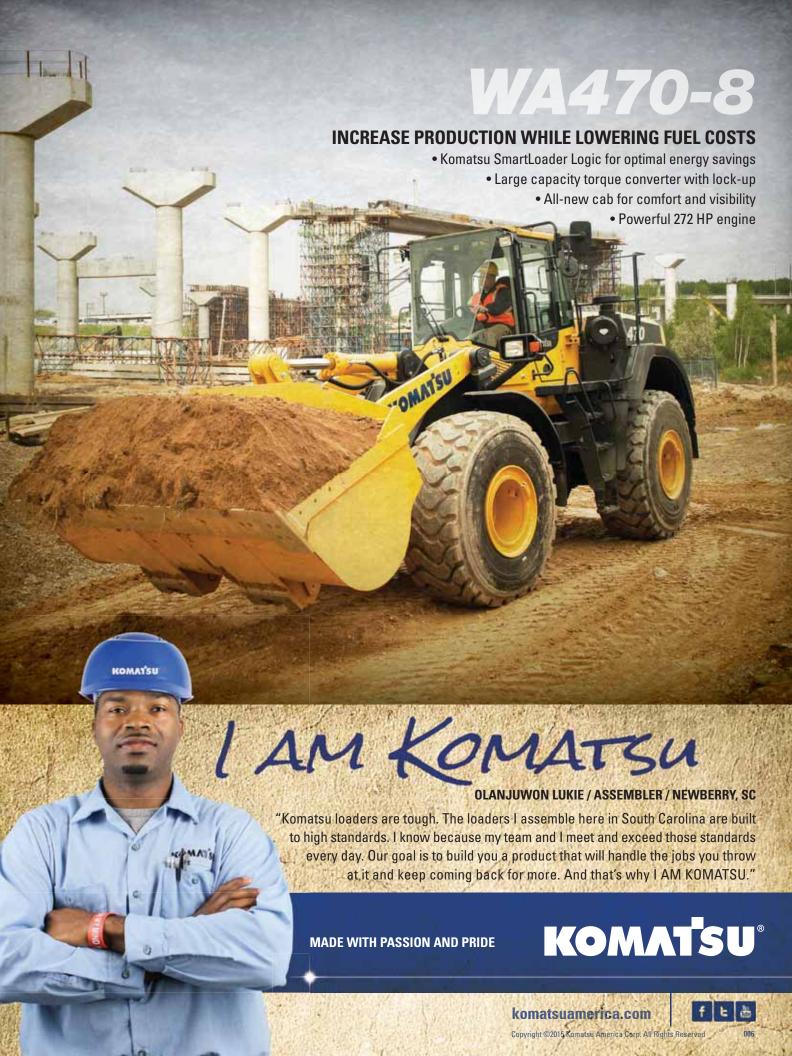


Construction employment totaled more than 6.3 million in July 2015, the most since February 2009, but the total rose by only 6,000 in July and by an average of only 7,200 per month during the previous five months, Simonson noted. The number of unemployed workers who reported last working in construction totaled 474,000, the fewest since 2001.

"The sector's job gains in the past five months have been intermittent and relatively sluggish despite signs of accelerating demand for construction," Simonson said. "The latest Census Bureau data show the amount of construction spending is rising at the fastest rate since 2006. There are several indicators – such as the steady increase in hiring of architects and engineers – that suggest demand for construction will remain strong, but contractors may have difficulty finding enough workers to take on all those projects."

AGC officials said that a number of factors are contributing to the shrinking pool of available labor, including the fact that many aging workers are retiring, while other workers who lost their jobs during the downturn left the industry for other sectors. Officials added that the lack of high school-level programs that expose students to construction as a potential career path means fewer graduates are pursuing careers in the construction industry.

"We are doing many students a real disservice by not telling them how they can make a good living working in construction," said Stephen E. Sandherr, AGC's CEO, noting that its Workforce Development Plan calls for increasing the number of career and technical education programs nationwide. "The more options we give students, the more likely they are to succeed."



Report shows infrastructure investment at a 30-year low

A recent report from the Center of Budget and Policy Priorities shows that infrastructure spending is at a 30-year low. Total capital spending as a share of GDP was down in all but five states and the District of Columbia between 2002 and 2013.

Federal investment in infrastructure dropped from 1 percent to one-half percent of GDP, leaving states to pick up more of the tab. Many states, however, have elected to spend less and instead cut taxes, according to the report.

"Tax cuts will spur little-to-no economic growth and take money away from schools, universities and other public investments essential to producing the talented workforce that businesses need," said the report.
"The pattern of neglect of infrastructure by states – the primary stewards (along with their local government partners) of the nation's infrastructure – has serious consequences for the nation's growth and quality of life as roads crumble, school buildings become obsolete and outdated facilities jeopardize public health."

IEA expects oil prices to stay low throughout 2016

The International Energy Agency (IEA) expects oil prices to stay low throughout 2016 as oversupply continues. In its Medium-Term Oil Market Report, the IEA said supply will outpace demand by up to 1.1 million barrels per day.

"Only in 2017 will we finally see oil supply and demand align, but the enormous stocks being accumulated will act as a dampener on the pace of recovery in oil prices when the market, having balanced, starts to draw down those stocks," according to the report.

Pipeline groups pursue inspector certification

Pipeline industry groups announced support for certification of all pipeline inspectors during the next two years. The groups note that standardized certification would improve the quality of new construction.

"Safe pipeline construction and quality materials help ensure safe operation," said Donald Santa, President and CEO of the Interstate Natural Gas Association of America. "Having certified inspectors helps everyone raise the bar."

Construction equipment theft costs millions

More than a third of construction, engineering and infrastructure companies have experienced asset theft – including equipment – during a one-year period, according to the 2015 Kroll Global Fraud Report. It notes that more than \$7 million worth of construction machinery was

stolen and recovered in 2014. Replacing that equipment would have cost owners nearly double that amount.

Backhoe loaders and skid steers were the most frequently stolen pieces of equipment. The report indicated that an increase in theft occurs from November through March. ■

On the light side



"I'm tired of hunting and gathering. Let's invent taxes and government."



"Don't I get credit for all the red lights I've stopped for?"



"Reggie is retired, but he still goes to work to play the office sports pool."

Brain Teasers

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

- 1. S N I P ___ <u>S</u>
- 2. L M E D O ___ <u>D</u> ___
- 3. D O R E L A __ _ A __ _ _
- 4. T O R E C P J ___ R ___ E ___
- 5. N A T R R Y W A ___ R __ _ T __

Did you know...

- Banging your head against a wall burns 150 calories an hour.
- When hippos are upset, their sweat turns red.
- The Hoover Dam is made of more than 3,125,000 cubic yards of concrete.
- There are enough roadways in the United States to stretch to the moon and back eight times.
- The first blue-colored rose was genetically created in 2009.
- Olympic gold medals are actually 93-percent silver and 6-percent copper – gold makes up only 1 percent of the medal.
- There is a one in 9.2 quintillion chance of filling out a perfect NCAA March Madness bracket.
- Americans buy more than 700 million marshmallow Peeps and consume more than 16 million jellybeans during the Easter season.
- Nomophobia is the fear of being without a mobile phone or losing a signal.

