

ROAD TO SUCCESS

OCTOBER 2019

KOMATSU®

A PUBLICATION FOR AND ABOUT ROAD MACHINERY LLC CUSTOMERS



A MESSAGE FROM ROAD MACHINERY



Sloan Brooks

ROAD MACHINERY

Dear Valued Customer:

While industry groups are actively recruiting new employees to fill skilled-labor positions, a shortage of such workers remains. One aspect of today's construction industry that many potential crew members may find attractive is the growing use of technology, especially when it comes to equipment.

Komatsu revolutionized integrated GPS technology and is now taking its *intelligent* Machine Control dozers to the next level with Proactive Dozing Control logic to mimic the actions of seasoned operators during rough-cut application. Now, these dozers truly deliver first-to-last-pass auto blade control and continuous data collection. We believe this is another giant leap in helping novice operators become skilled dozer hands faster. You can read more about how Komatsu has continued to improve its innovative technology in this issue of your Road To Success magazine.

Komatsu also led the way in bringing integrated technology to excavators and has added another to the lineup with its new PC290LCi-11. It is well-suited for applications that require good stability and working range, and its size helps to avoid most transportation limits associated with larger-size-class excavators. Find out more inside.

This issue features two case studies, one shares the success story of a customer who relies on the *intelligent* Machine Control technology, while the second focuses on a waste-industry application. I think you will find both interesting as each provides insight into how Komatsu machinery offers greater accuracy, efficiency and productivity.

Whatever equipment you use, proper maintenance is essential. Fluids are part of that and it's important to use the ones designed for the conditions you face in order to get the best protection. If high heat is a problem, Komatsu's HO56-HE hydraulic oil could be the solution. We've included an article that details its benefits.

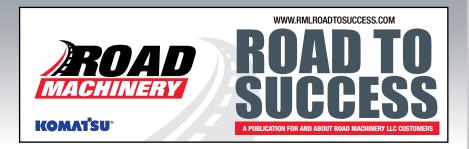
As always, if there's anything we can do for you, please call or stop by one of our branch locations.

Sincerely,

ROAD MACHINERY LLC

Sloan Brooks President & CEO

Taking 'intelligence' to the next level



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Examine why outfitting its excavator fleet with Komatsu waste packages helps a recycling firm achieve production goals.

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Come along as customers learn about the latest equipment at Komatsu's Demo Days.





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POWER GRADE INC.

Finding its niche helps southern California company build, maintain list of satisfied customers



Chris Doty, Superintendent

When times are slow and work is hard to come by, some companies seek additional sources of revenue. Such was the case with Power Grade Inc. nearly a decade ago in the midst of the Great Recession, near the point when Chris Doty joined the firm as a grade checker. His first assignment was on a tilt-wall project in Moreno Valley.

"At the time, it was the largest building pad under construction in California," said Doty, who has worked his way up to Superintendent of the Ontario, Calif., company. "Power Grade was doing general earthwork, and still does, but it was willing to step out and pursue other markets in order to ensure its survival."

One area that sparked Power Grade's interest was civil municipal work for power companies, especially electrical entities. It proved fruitful, and Power Grade quickly developed a solid foundation in that sector. Today, it does everything from clearing rights of way to putting up electrical towers. Power

A member of the Power Grade team uses a Komatsu WA470-8 wheel loader on a recent project. "The loaders have a lower center of gravity, so we believe they are more stable," said Superintendent

Grade's services include earthmoving, drilling for and installing concrete foundations and, in some instances, erecting the towers. The firm also handles complete substation construction.

"This is a niche that we have excelled in so much so that customers ask us to take on more projects and additional types of work," said Doty. "We are now the fastest-growing municipal contractor in southern California. Our jobs range from tens of thousands to multimillions of dollars, depending on the scope. It can be anything from constructing a lay-down yard, to grading for new tower sites, to comprehensive engineering and construction of multiple locations."

One of the company's current contracts calls for the firm to construct 320 sites for new electrical towers over a 70-mile area that runs through varying landscapes near Los Angeles, including wide-open stretches, mountains and cities. The job is expected to take 24 to 36 months to complete. At one location in Colton, a crew put up a 330-foot wall and an access road.

"We built it up using dirt that was borrowed from other sites," Doty explained. "We try to balance out projects as much as possible. I think that our attention to detail is a key strength, along with the quality of our work. We also understand the importance of environmental, biological and archaeological issues and are sensitive to those as we plan for and progress through a project."

Vast list of services

While electrical continues to be Power Grade's top source of business, it does perform other municipal jobs across a wide swath of southern California, from Fresno to the Mexican border. It also handles assignments in other states, including Arizona and Nevada.





A Power Grade operator places dirt for a new road and grades a slope with a Komatsu D39EX-24 dozer on a Colton, Calif., jobsite. The company added Komatsu dozers after a demo. "Those dozers outpushed the competitive machines they were up against," said Superintendent Chris Doty. "That convinced us to give Komatsu a shot, and we're glad that we did."

"As a company, we have more than three decades of experience, and quite a lot more when you total all the years of our 140-member-plus staff," said Doty. "One of the reasons we maintain success is an outstanding group of loyal employees. They are dedicated to getting jobs done on time and on budget. The owner, Jim Putman, has made this a great place to call home. The environment is second-to-none, so our turnover rate is very low."

Crews are involved with as many as seven to 10 projects at any time. As a civil general contractor, Power Grade serves residential, industrial and commercial clients alike, including full site development that consists of clearing and grubbing, mass excavation, rough and finish grading, wet and dry utilities, paving, and structural concrete. In some instances, it may also implement storm drain and channel reinforcement, slope and soil stabilization, project consulting and management. Additional offerings include developing cost-control strategies and budgeting.

"We continue to grow because we're unafraid of challenges or trying new things, whether they are outside of our niche or a part of it," Doty emphasized. "For instance, during the past few years, we have started putting up block walls around substations and installing concrete piers and conduit for security-camera poles."

Dependability across the board

Power Grade's electrical-related projects cover a wide range of conditions and locations. At times this includes remote, uninhabited sites that may be hours from a paved road. Doty said reliable equipment is essential to maintaining production and staying on schedule.

"Customers expect us to start and finish on time; we are committed to that and meet their expectations," said Doty. "Our Komatsu machinery plays a vital role in that. We've used it in temperatures ranging from well below

Continued . . .

Komatsu CARE provides 'peace of mind'

.. continued

freezing to desert heat as high as 115 degrees, with no issues."

Doty acknowledges that Komatsu was not at the top of his list of manufacturers until approximately two years ago. At that time, Road



Road Machinery Account Manager/Sales Chris Porter (left) meets with Power Grade Superintendent Chris Doty on a jobsite in Colton, Calif. "We are very thankful for Chris' persistence in pursuing our business," said Doty. "He continues to check on us to make sure we are happy and the machines are performing as they should."

Power Grade uses Komatsu excavators, including this PC360LC-11, equipped with attachments to drill holes for piers, "They have plenty of power to get the job done," said Superintendent Chris Doty. "Across the board, we are extremely pleased with our Komatsu equipment's productivity, reliability and efficiency."



Machinery Account Manager/Sales Chris Porter suggested he demo a couple of dozers.

"Everything Chris told us about Komatsu proved to be true," stated Doty. "Those dozers outpushed the competitive machines they were up against. That convinced us to give Komatsu a shot, and we're glad that we did. The thought that goes into Komatsu's engineering is great. For instance, the dozer seat sits forward in the cab, which gives the operator greater visibility. That can equate to better production."

In addition to D39, D51 and D65 dozers, Power Grade now has PC170 and PC360 excavators and WA470 wheel loaders. "The loaders have a lower center of gravity, so we believe they are more stable," said Doty. "We use the PC170s and the PC360 to drill holes for piers, and they have plenty of power to get the job done. Across the board, we are extremely pleased with our Komatsu equipment's productivity, reliability and efficiency."

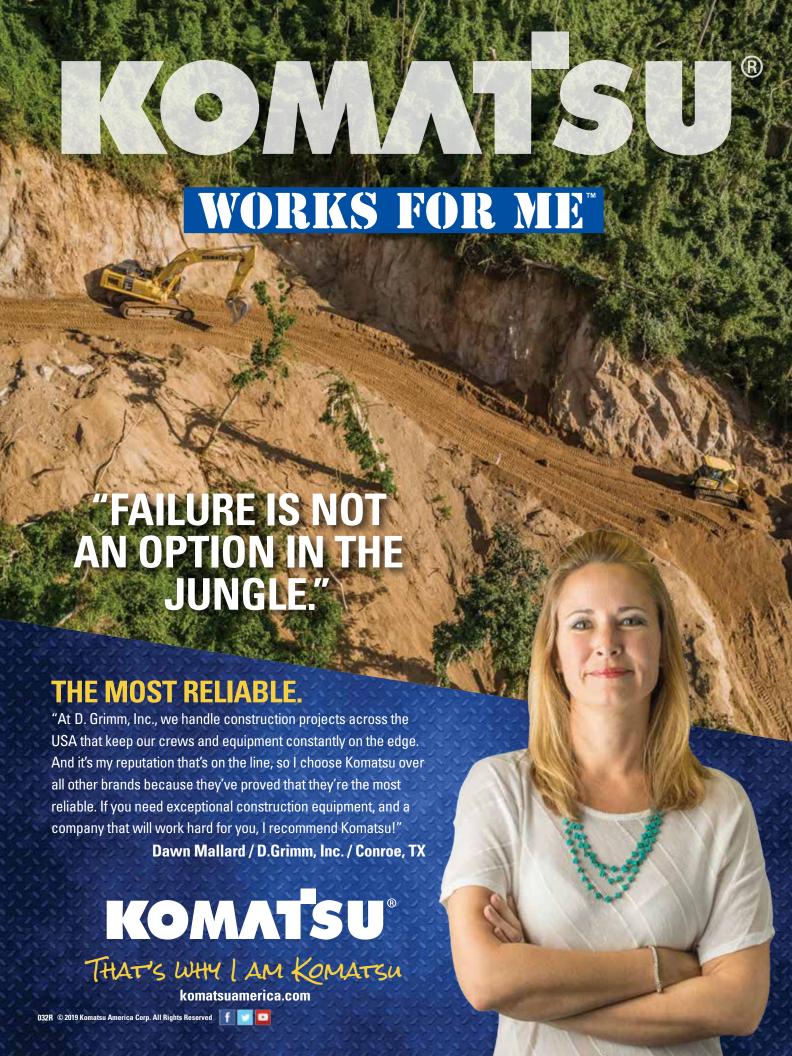
Doty said he's also more than happy with the relationship Power Grade has built with Road Machinery. "We are very thankful for Chris' persistence in pursuing our business. He and Road Machinery are not looking to make a sale and never be heard from again. He continues to check on us to make sure we are happy and the machines are performing as they should.

"We got an upgraded fleet along with dependable service from Road Machinery and Komatsu CARE," Doty added. "They contact us when a routine interval is coming up to schedule a convenient time to have their techs do the work. We have peace of mind knowing that our machines are taken care of, so we can continue to focus on getting jobs completed. No other dealer has done anything like that for us before."

Concentrating on being the best

Power Grade's willingness to tackle new challenges has kept it busy and growing. However, Doty says the company isn't ready to pursue other markets at this time.

"We want to concentrate on being the best at what we do, and that's providing an exceptional product for our customers and an excellent place for our employees to work," shared Doty. "If we become too big and spread out, that may change. We're happy right where we are."





RENTAL MACHINES

2019

ARTICULATED TRUCKS KOMATSU	ARTICU	ILATED TRUCKS	KOMATSU °
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MODEL	MAX WEIGHT	PAYLOAD	CAPACITY	SPEED	HP	TIER
HM300	116,823 lbs	30.9 tons	22.4 yd	36.4 mph	332	T4F
HM400	162,597 lbs	44.1 tons	31.4 yd	34.7 mph	469	T4F

CRAWLER DOZERS				КОМА	TSU	•
MODEL	WEIGHT	BLADE	CAPACITY	BLADE WIDTH	HP	TIER
D39EX*	20,834 lbs	PAT	2.89 yd	8'11"	105	T4F
D39PX	21,804 lbs	PAT	3.01yd	9'9" LGP	105	T4F
D51EX*	28,484 lbs	PAT	3.5 yd	10'0"	130	T4F
D51PX	29,145 lbs	PAT	3.8 yd	11'0" LGP	130	T4F
D61EX*	37,237 lbs	PAT	4.5 yd	10'9"	168	T4F
D61PX	41,734 lbs	PAT	5.0 yd	12'8" LGP	168	T4F
D65EX	47,355 lbs	PAT/Sig	5.9 yd	11'2"	205	T4F
D65PX	49,315 lbs	PAT/Sig	5.78 yd	13'2" LGP	205	T4F
D65EXi	49,559 lbs	PAT/Sig	5.78 yd	11'2"	205	T4F
D155	87,100 lbs	Sigma	12.3 yd	13'4"	354	T4F
* Machin	aldelieve ai a	with intoar	atad CDS car	trole		

* Machine is available with integrated GPS controls

HYDRAULIC EXCAVATORS KOMAT'SU

MODEL	WEIGHT [DIG DEPTH	CAPACITY	DIG FORCE	HP	TIER
PC88	18,558 lbs	15'2"	.37 yd	13,780 lbs	55	T4F
PC138	31,504 lbs	18'0"	0.34 - 1.24 yd	18,300 lbs	92	T4F
PC170	37,740 lbs	20'6"	0.48 - 1.22 yd	24,470 lbs	115	T4F
PC210	48,722 lbs	21'9"	0.66 - 1.57 yd	29,762 lbs	165	T4F
PC210i	48,950 lbs	21'9"	0.66 - 1.57 yd	29,762 lbs	158	T4F
PC228	54,405 lbs	21'9"	0.66 - 1.85 yd	31,085 lbs	148	T4F
PC240	55,129 lbs	22'8"	0.76 - 1.85 yd	34,171 lbs	177	T4F
PC290	70,702 lbs	22'8"	0.76 - 2.56 yd	34,171 lbs	196	T4F
PC360	80,547 lbs	24'3"	0.89 - 4 yd	51,150 lbs	257	T4F
PC490	109,250 lbs	30'2"	1.5 - 6 yd	53,790 lbs	359	T4F
PC650	140,456 lbs	27'10"	2.05 - 4.9 yd	64,150 lbs	436	T4F

MOTOR GRADER KOMATSU

MODEL	WEIGHT	MOLDBOARD	DRIVE	HP	TIER
GD655	37,346 lbs	14'0"	4WD	218	T4F

WHE	EL LOAD	KOMA	TSU'			
MODEL	WEIGHT	TIPLOAD	CAPACITY	BREAKOUT	HP	TIER
WA200	26,100 lbs	18,971 lbs	2.5 yd	24,251 lbs	126	T4I
WA270	28,531 lbs	20,216 lbs	3.0 yd	29,487 lbs	149	T4F
WA320	33,731 lbs	21,186 lbs	3.5 yd	36,310 lbs	165	T4F
WA380	40,532 lbs	29,630 lbs	4.0 yd	35,495 lbs	191	T4F
WA470	53,352 lbs	29,630 lbs	5.0 yd	43,163 lbs	272	T4F
WA500	79,802 lbs	54,326 lbs	8 - 9.8 yd	51,150 lbs	353	T4F

CRAWLER CARRIERS TERRAMAC

MODEL	CAPACITY	HP	WEIGHT	TIER
RT9	18,000 lbs	230	26,000 lbs	T3
RT14	28,000 lbs	280	32,700 lbs	T3
RT14R	28,000 lbs	320	40,000 lbs	T4F

LIC BREAKERS	S	NPK
ENERGY CLASS	CLASS	WEIGHT
1,300 ft lbs	PC88	1,064 lbs
2,000 ft lbs	PC138	2,150 lbs
2,500 ft lbs	PC170	2,900 lbs
4,000 ft lbs	PC200-290	4,200 lbs
5,500 ft lbs	PC290	5,650 lbs
8,000 ft lbs	PC300-360	6,800 lbs
12,000 ft lbs	PC400-490	7,800 lbs
	ENERGY CLASS 1,300 ft lbs 2,000 ft lbs 2,500 ft lbs 4,000 ft lbs 5,500 ft lbs 8,000 ft lbs	1,300 ft lbs PC88 2,000 ft lbs PC138 2,500 ft lbs PC170 4,000 ft lbs PC200-290 5,500 ft lbs PC290 8,000 ft lbs PC300-360

MATERIAL PROCESSORS & SHEARS NPK

MODEL	JAW OPENING	JAW TYPE	CLASS	WEIGHT	MAX CRUSH
M-28G	35.8"	Pulverizing	PC200	6,850 lbs	125 tons
M-28K	25.1"	Shearing	PC200	6,900 lbs	133 tons
M-35G	38.6"	Pulverizing	PC300	7,544 lbs	127 tons
M-35K	22.8"	Shearing	PC300	7,831 lbs	125 tons

DOUBLE DRUM ROLLERS			
WIDTH	WEIGHT	HP	TIER
35"	3,500 lbs	24	T4F
47"	5,900 lbs	25	T4F
51"	9,000 lbs	49	T4F
66"	23,000 lbs	130	T4F
84"	33,500 lbs	130	T4F
	WIDTH 35" 47" 51" 66"	WIDTH WEIGHT 35" 3,500 lbs 47" 5,900 lbs 51" 9,000 lbs 66" 23,000 lbs	WIDTH WEIGHT HP 35" 3,500 lbs 24 47" 5,900 lbs 25 51" 9,000 lbs 49 66" 23,000 lbs 130

SINGLE DRUM ROLLERS			♦ DYNI	APAC
MODEL	WIDTH	WEIGHT	HP	TIER
CA1300D	54"	10,000 lbs	75	T4F
CA1400D	66"	14,000 lbs	75	T4F
CA2500D	84"	25,000 lbs	130	T4F

PAD FOOT RO	OYNA	IPAC		
MODEL	WIDTH	WEIGHT	HP	TIER
CA1300DPDB	54"	10,000 lbs	75	T4F
CA1400DPDB	66"	14,000 lbs	75	T4F
CA2500/3500DPDB	84"	25,000 lbs	130	T4F
CT3000 TAMPING COMP		49,000 lbs	260	T4F

PNEUM.	OYNAPAC			
MODEL	WIDTH	WEIGHT	HP	TIER
CP1200	69"	12.5k-28.5k lbs	74	T4F
CP2700	72"	27k-60k lbs	110	T3

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PROXIMITY PROMISE

New Road Machinery branch brings support closer to Golden Queen, other businesses near Mojave, Calif.

Three years ago, Golden Queen Mining began operations at its Soledad Mountain Project, a gold and silver mine near Mojave, Calif. From the start, it has utilized Komatsu equipment from Road Machinery to remove overburden and extract materials from its pits to the primary crusher.

Road Machinery assisted in assembling machines for Golden Queen, including WA800 and WA900 wheel loaders, 100-ton HD785 rigid-frame trucks and a PC3000-6 shovel. As part of its ongoing support, Road Machinery recently opened a new facility in Mojave, just minutes from the mine. The branch includes an 8,000-square-foot building that houses parts inventory as well as sales and service areas.

"You can look out the front door and see the mine," said Sloan Brooks, Road Machinery President & CEO. "Prior to opening this location, we had a small store in town; however, most of the parts for the mine were stored in the Los Angeles area. With traffic congestion in the city, response time can often be inhibited. Having this dedicated facility alleviates that."

Road Machinery's General Manager, Product Support Mike Moore said there is also room to grow. "Closer proximity to the mine allows for more efficient service. We have several million in parts inventory and the space to add on, if needed. Currently, we have three technicians on site at the mine and three staff members who will work out of this facility."

Brooks and other Road Machinery personnel christened the branch during an open house this summer with several Golden Queen Mining staff members in attendance.

Continued . . .

Road Machinery's new Mojave, Calif., branch is located place to Calder Over Mining & Soleded Mountain

Road Machinery's new Mojave, Calif., branch is located close to Golden Queen Mining's Soledad Mountain Project. The mine has a 100-percent Komatsu fleet, including a new PC3000-6 shovel that Road Machinery personnel recently assembled.



Sloan Brooks, President & CEO



Mike Moore, General Manager, Product Support



Road Machinery President & CEO Sloan Brooks (center) cuts the ribbon to open the new Mojave, Calif., branch while other staff members look on.

'Great example of ongoing dedication'

... continued



Bob Walish, CEO, Golden Queen Mining

Golden Queen Mining CEO Bob Walish said the new location showcases Road Machinery's commitment to serve the mine's equipment and support needs.

Complete Komatsu fleet

"Our entire fleet is comprised of Komatsu equipment; it's a big investment," said Walish. "Road Machinery has been here for us every step of the way, and we have built a great relationship. They understand how critical quality equipment and responsive support is to maintaining our production. We're all about

productivity. This branch is a great example of their ongoing dedication to that."

Brooks pointed out that while the Mojave branch is close to Golden Queen, the facility is designed to service more than one customer.

"We support several mines in this area, and this is a hub for that," said Brooks. "We're excited about what lies ahead. Current projections for Golden Queen are about 15 to 20 years for the life of the mine, and some others are much longer. We are committed to being here for all of them for many years to come."



(L-R) Road Machinery Mining Project Manager Dean Alonzo talks with Golden Queen Mining Mine Manager Tim Mazanek and CEO Bob Walish during the Mojave open house. "This is a great facility to support Golden Queen and other mine, quarry and construction operations in the area," said Alonzo.

(L-R) Eli Blades, Shawn Folks, Dusty Basham and John Horton with Golden Queen Mining check out Road Machinery's new Mojave branch.





Golden Queen Mining employees Lisa Harding and James Kinnaman tour the new site.



Road Machinery Project Manager Adam Gaston (center) shows open house attendees around the facility.

GUEST OPINION

TAKE A DIFFERENT ROUTE

Construction careers often pay as much or more than those requiring traditional four-year degree

As our children grow up, we continually ingrain in them that there is one route to success – a four-year degree. However, higher education is not solely defined by a bachelor's degree. There are other paths that will guide them in the right direction before entering the workforce.

While there are misconceptions about the construction and skilled-labor industry, numbers prove that there are millions of jobs available in this field and compared to college graduates, they're well-paid. The average starting salary for college graduates stands at \$50,004; however, student debt is on the rise and the class of 2018 graduated with an average of \$29,800 in loans. One of the most important reasons students choose to pursue a four-year degree is to land a high-paying job. The truth is, multiple careers in construction make an average of \$65,000 per year and do not require a degree from a large institution.

This poses the question: How does one get higher education without going to a traditional college or university? The answer is simple: apprenticeships; technical or community colleges; and career and technical education (CTE).

Earning while learning

Apprenticeships provide valuable on-the-job training and are structured programs relating to the technical and academic competencies that apply to the job. In fact, the construction industry in the United States represents approximately 30 percent of all active, registered apprentices. Construction is one of the few industries where individuals are given the opportunity to develop skills and knowledge about a career, while earning a paycheck.

Technical or community colleges offer shorter time spent in school and can be just as beneficial and rewarding as a four-year degree. In these programs, minimal debt is incurred, and the skills and education obtained apply directly to careers upon graduation.

CTE prepares secondary, postsecondary and adult students with the hard and soft skills needed to build a successful career and life. Classes prepare students for a variety of high-skill, high-wage and high-demand careers.

While a four-year degree may be the path for some, it is not the only form of post-secondary education. Higher education is about acquiring skills and knowledge that will help you succeed in your desired career path.

Deanna Quintana is a marketing intern at the National Center for Construction Education and Research (NCCER). She is learning about the industry and how to recruit and educate new craft professionals. This article is excerpted from a blog post, and reprinted with permission from "Breaking Ground: The NCCER Blog" at blog.nccer.org.



Deanna Quintana

Deanna Quintana emphasizes that careers in construction and the skilled trades can be as, or more, lucrative and rewarding than those requiring the traditional route of higher education that leads to a four-year degree.



INDUSTRY EXTRAVAGANZA

'LARGEST HEAVY METAL SHOW'

CONEXPO-CON/AGG returns to Las Vegas with record number of exhibitors, exhibit space

The "World's Largest Heavy Metal Show in 2020" is right around the corner with the return of CONEXPO-CON/AGG to the Las Vegas Convention Center and beyond, March 10-14. Presented every three years, it is North America's biggest trade show and features the latest in equipment and innovation from every key construction-related sector.

In total, a record-setting 2,800 exhibitors are expected to converge on 2.6-million square feet of exhibit space. The show's footprint has changed with the Gold Lot under construction, making it unavailable. Instead, CONEXPO-CON/AGG will use the Las Vegas

North America's largest trade show, CONEXPO-CON/AGG will feature the latest in equipment and innovation from every key construction-related sector. It is slated for March 10-14, 2020, in Las Vegas.



Festival Grounds, located on the Las Vegas Strip adjacent to the Circus Circus hotel. The grounds will contain lifting (aerial and cranes), earthmoving, hauling and underground construction equipment, among other things.

"This show is shaping up as one of the best ever; attendees and exhibitors will not be disappointed," said Mary Erholtz, CONEXPO-CON/AGG Chair. "AEM (Associated Equipment Manufacturers, the show's lead sponsor) and our show committees of industry leaders are working hard to deliver an outstanding event focused on the latest innovations, technologies and best practices to succeed in our changing world."

'Smart city' display

Similar to 2017, CONEXPO-CON/ AGG will emphasize technology. The Tech Experience returns and focuses on three areas that impact the industry: modern mobility; sustainability and sustainable building; and smart cities, according to Al Cevero, Senior Vice President Construction, Mining & Utility at AEM.

Cevero and other members of the show planning team recently unveiled a 10 x 22-foot "smart city" replica scheduled for display. It demonstrates how a smart city, through sensors and analytics "will be able to transform information into digestible data, providing knowledge for the city to work smarter," according to show organizers.

The smart city replica will showcase several scenarios, including various city grids and how a city responds to heat, wind and storms; connectivity, including 5G sensors, telematics



and the internet of things (IoT); and the impacts of construction such as the jobsite of the future within the city and how equipment will communicate.

"The main goals of the Tech Experience are to drive awareness and adoption of new technologies and innovations, engage and attract the next generation of attendees and position the show as a thought leader," said Cevero. "Our plan is to demonstrate how the three areas will transform the contractor's business of the future."

Multitude of education sessions, tracks

More than 150 educational sessions are scheduled throughout the week to highlight the latest topics and industry trends. They are grouped into tracks for ease in finding areas of interest. Tracks include aggregates; asphalt; earthmoving and site development; equipment management and maintenance; business best practices; how to attract, engage and retain talent; safety; and technology solutions.



CONEXPO-CON/AGG will be co-located with the International Fluid Power Expo, and new for 2020 is the opportunity to mix and match education sessions offered through both shows. Attendees can register for educational sessions as well as the show itself through the CONEXPO-CON/AGG website at www.conexpoconagg.com.



PRODUCT FOCUS

NEW INTELLIGENT EXCAVATOR

PC290LCi-11 uses 3D design data to deliver first-to-last-pass accuracy

Komatsu augmented its *intelligent*Machine Control lineup with the addition
of the new PC290LCi-11 that provides
first-to-last-pass accuracy. Like its predecessors,
the excavator features Komatsu's unique
sensor package – stroke-sensing hydraulic
cylinders, an inertial measurement unit sensor
and global navigation satellite system antennas –
that utilizes 3D design data to accurately check
its position against the target elevation and
semi-automatically limit overexcavation.

"The PC290LCi-11 is perfect for applications where customers are looking for good stability

and working range. It has a 30-ton-class undercarriage and an upper structure similar to our standard PC240LC model. This excavator also includes a 3.2-meter (10.49-foot) arm," said Andrew Earing, Senior Product Manager, Tracked Equipment, noting that a 3.5-meter arm option will be available soon. "Its size helps to avoid most transportation limits associated with larger size-class excavators, making it a good fit for residential and utility work, as well as smaller nonresidential jobs."

Users can load design data into the intelligent



Andrew Earing, Senior Product Manager, Tracked Equipment

Brief Specs on Komatsu's PC290LCi-11 Excavator

> Model PC290LCi-11

Net Horsepower 196 hp

Operating Weight 70,702-72,091 lb

Bucket Capacity .76-2.13 cu yd



Display shows realistic design surface

continued

The machine and design surface are shown in a realistic 3D format. The angle and magnification of the views can be changed, allowing the operator to select the best option, depending on working conditions.

Easily switch modes, offset functions

Operators can choose between manual and semi-automatic modes, as well as design offset functions using switches on the joysticks. The semi-automatic mode features Auto Grade Assist. As the operator moves the arm, the boom adjusts the bucket height to trace the target surface and minimize the chance of digging too deep.

Additionally, the PC290LCi has Auto Stop Control that halts the working equipment when the bucket edge reaches the design surface, which reduces design surface damage. Minimum Distance Control regulates the bucket by automatically selecting the point on the bucket closest to the target surface. Finally, the Facing Angle Compass shows

edge to be accurately positioned square to the target surface.

"Komatsu introduced *intelligent* Machine Control excavators four years ago with the PC210LCi, which is now in its second generation with the dash-11 model," said Earing. "As we continued to expand our intelligent product line, we heard customers asking for a PC290LCi. With the introduction of this model, we are pleased to demonstrate our commitment to our customers."

Covered by Komatsu CARE

The PC290LCi-11 has Komatsu's KOMTRAX Level 5 technology that provides machine data such as fuel and diesel exhaust fluid (DEF) levels, Komatsu Diesel Particulate Filter (KDPF) regeneration status, machine location, cautions and maintenance alert information.

Whether rented, leased or purchased, the PC290LCi-11 is covered by Komatsu CARE, complimentary for the first three years or 2,000 hours. It includes scheduled factory maintenance, a 50-point inspection at each service interval and up to two complimentary KDPF exchanges and two DEF tank flushes in the first five years.



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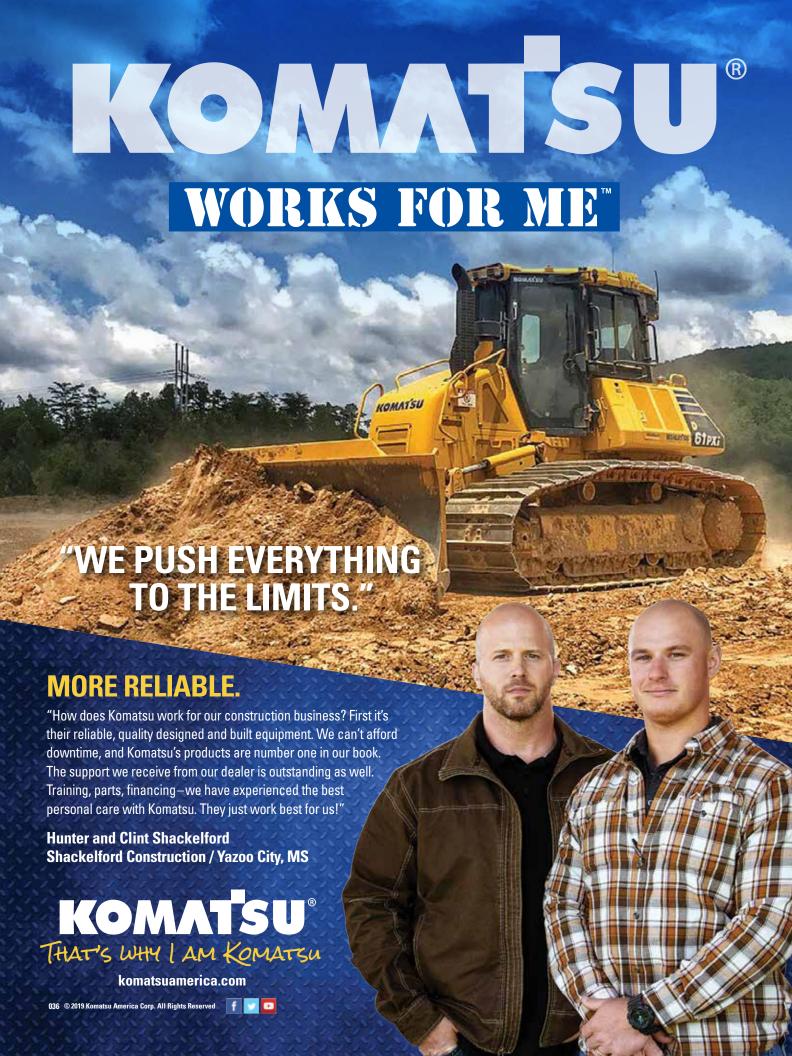
"At Selge Construction, we're a family business. My son-in-law and even grandson are involved and interested in this great occupation. I've built a good name in our marketplace with a reputation for quality work and integrity in the way we do business. And I choose Komatsu because they match my values. Their excavators help my crews and family carry on our goals: to provide the best job for an honest price. It's these and many other reasons why Komatsu works for us!"

Marv Selge (with Noah & Justin) / Selge Construction, Inc. / Niles, MI



komatsuamerica.com







COMPLETING MORE JOBS FASTER

R.A. Alexander & Sons saves time, money with intelligent Machine Control equipment

Three years ago, Bill Jagoe, Owner of Jagoe Excavating, approached Mark Ballard, President of R.A. Alexander & Sons, about expanding the existing relationship between the two companies. The new collaboration helped both firms immediately by filling gaps for each. Together, the two businesses can now handle nearly any earthwork-related project.

Benefits for R.A. Alexander & Sons included the ability to offer utility-installation services and the opportunity to upgrade its equipment fleet. For the latter, Ballard contacted his local Komatsu distributor to discuss adding additional *intelligent* Machine Control equipment to complement the D51PXi dozer he purchased in 2015. Ultimately, Ballard acquired a second D51PXi in addition to a D61PXi dozer and a PC210LCi excavator. All feature factory-integrated grade control technology that makes operators even more effective from start to finish.

Advantages immediately apparent

"Augmenting our fleet with *intelligent* Machine Control pieces made us 40 to 50 percent faster, and we're achieving accuracy within two-tenths of an inch," stated Ballard. "Having a model that we can plug in and follow, speeds us up significantly. We save the most time on minor details associated with parking lots and streets. It's also phenomenal on earthmoving projects with major grade changes. There's no lost time with operators stopping to read plans or ask questions. Everything is on the in-cab monitor."

Jagoe said the results were noticeable right away. "I was surprised there weren't any stakes at the jobsite. However, I noticed that

the machines never stopped moving, and they were finishing jobs sooner. The *intelligent* Machine Control products save us money on things like surveying and material costs. Plus, we are able to do more projects because we can work so much faster."



An *intelligent* Machine Control D61PXi dozer and a PC210LCi excavator enable R.A. Alexander & Sons to finish jobs sooner, allowing it to take on more projects. "Augmenting our fleet with *intelligent* Machine Control pieces made us 40 to 50 percent faster, and we're achieving accuracy within two-tenths of an inch," stated President Mark Ballard.



Mark Ballard, President, R.A. Alexander & Sons



Bill Jagoe, Owner, Jagoe Excavating



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"WE'RE NOT A BIG COMPANY, BUT KOMATSU TREATS US LIKE WE ARE."

BETTER SUPPORT.

"My cousin Thomas and I started our construction company on a wing and a prayer.

We couldn't have done it without the financing, training, tech assistance and support we received from Komatsu and our distributor. The products are top quality. They make us efficient at our job, and feel connected—like they want to be our partner in this. That's why Komatsu works for us!"

Brian (left) and Thomas Cronin / Prosperity Construction / Jackson, MS



THAT'S WHY I AM KOMATSU

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EQUIPPED FOR SUCCESS

Excavator fleet outfitted with waste packages helps recycling firm meet production goals

Lakeshore Recycling Systems (LRS) is one of the largest waste and recycling companies in the Chicago area. In order to process the massive amount of waste material that comes through its seven locations, LRS requires equipment that is dependable, versatile and durable. It found a solution with a fleet of 15 Komatsu PC210LC excavators outfitted with Komatsu waste packages.

"Our PC210s run up to 20 hours a day – sometimes as many as 11 hours straight – which is vital to keeping us on schedule," explained LRS Managing Partner Rich Golf. "We know that they are going to run every day."

The company uses its PC210LC fleet to sort through piles of waste material, removing pieces that can hinder the performance of its production line.

"It is an instrumental tool," shared Golf.
"Operators can identify items that might be harmful to machines downstream like hoses, electrical cords, plastics or bulky items."

Golf touts the versatility of the PC210LC for its ability to feed the operation, a task typically reserved for a large wheel loader.

"It takes up less space, uses less fuel and eliminates tire costs," said Golf. "It does the job of a WA500 wheel loader, just more efficiently."

Enhanced performance

To help the PC210s perform 20-hour work days in unforgiving conditions, LRS equips its excavators with Komatsu waste packages.

"Overheating can be a serious problem," stated Golf. "However, the Komatsu package includes an enhanced cooling feature with

wider fins and radiators that swing out. It improves access to the area and allows us to blow them out quicker to keep everything cool."

The waste package also includes an enhanced boom arm and stick as well as extra safety guarding around the cab. Golf credits the Komatsu waste package as one reason why LRS excavators work past the 15,000-hour mark – with some already at 25,000 hours. They also play a role in ensuring that those hours are completed safely.

"Komatsu has done a great job of creating waste packages that meet our needs," noted Golf. "This helps make the machines more durable as well as safer for the operator. Safety has been our top priority from day one, and that has been important in our relationship with Komatsu."



Rich Golf, Managing Partner, Lakeshore Recycling Systems

A Lakeshore Recycling Systems operator uses a Komatsu PC210LC excavator equipped with a Komatsu waste package to manage a pile of material. "Komatsu has done a great job of creating waste packages that meet our needs," noted Managing Partner Rich Golf. "This helps make the machines more durable as well as safer for the operator."







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KOMATSU & YOU

GOING BEYOND THE SALE

VP – Marketing Communications says Komatsu helps customers gain knowledge to maximize production

QUESTION: Komatsu is known as a "total solutions provider." What does that entail?

ANSWER: It means we can take care of customers throughout their machinery's life cycle. For instance, if a customer is looking for a machine with GPS-grading capabilities, Komatsu has several options including our integrated *intelligent* Machine Control dozers.

In addition, we, and our distributors, have expert personnel who can provide mapping services, jobsite setup, training, consultation and more. Most of our latest models come with Komatsu CARE, so scheduled maintenance is covered for the first three years or 2,000 hours. Programs are available to extend that, and we have other solutions to take care of maintenance and repairs.

QUESTION: What are the roots of Komatsu's customer-focused approach?

ANSWER: Our approach stems from our origins and from listening to customers. Komatsu was started nearly 100 years ago by Meitaro Takeuchi. He saw that the copper mine in Komatsu City, Japan, was about to exhaust its resources and close. The city's economy centered around that mine, so he started an equipment manufacturing company to provide new jobs and help people in his community develop new skills. That's how Komatsu was created.

For nearly a century, we have expanded globally because we visit jobsites and mines around the world to talk with customers in order to better understand their needs and challenges. Knowledge gained from those conversations helps develop equipment and solutions to meet those needs and alleviates challenges so customers can concentrate on getting their jobs



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.

Evelyn Maki, Vice President – Marketing Communications

Originally from Brazil, Evelyn Maki went to college with a focus on building a career in tourism. While in school, she interned at a heavy equipment manufacturer, took a position there upon graduation and has been supporting the industry ever since.

"I have been involved with sales, data analysis, forecasting and dealer development," said Maki. "I enjoyed those, but marketing is what I love. I really enjoy today's modern practices and am always thinking about ways we can shape our industry from a marketing perspective."

Maki moved to the United States when she was transferred to Wisconsin by her previous employer in the early 2000s. About eight years ago, she began working for P&H, then part of the Joy Global organization, now owned by Komatsu. Today, she is the Vice President – Marketing Communications for Komatsu. Maki oversees global marketing for Komatsu Mining, as well as for construction, forestry, forklift and industrial presses for North America.

"Komatsu is about more than manufacturing quality, dependable equipment; it's focused on building relationships by taking care of customers from every standpoint: sales, service and support," said Maki. "From a marketing perspective, that's what we want to highlight because, at the end of the day, this is what creates customers for life."

Customer conversations are vital

... continued

done more effectively and efficiently, backed by Komatsu.

QUESTION: How is Komatsu reaching customers to provide information about its equipment and support?

ANSWER: There are several avenues. From a global perspective, information is available on our websites, and that's a good starting point for research. Customers can also gain information from our social media pages and video library on YouTube.



During Demo Days at the Cartersville Customer Center, Komatsu experts provide valuable insights about maximizing machine production and more.

QUESTION: In addition to online resources, how can customers learn more about Komatsu equipment?

ANSWER: We encourage them to contact their distributor personnel. From a manufacturer marketing standpoint, we develop content that helps distributors and their representatives provide the most accurate, detailed information possible so that customers can make highly informed decisions. We serve as a support tool.

One way we do that is with events, such as Demo Days, where distributors can bring customers to our Cartersville Customer Center to operate machinery, and our experts provide insight into maximizing machine usage as well as other valuable content.

Our distributors are excellent resources and can directly help customers with details about equipment and the programs to maintain it, such as Komatsu CARE for Tier 4 construction equipment. We encourage anyone seeking information to contact their distributor and/or sales representatives who have the knowledge to put them in the right machine for maximum production and efficiency.

Komatsu has a long history of dedication to developing solutions for people and their businesses, according to Evelyn Maki, Vice President – Marketing Communications. "Komatsu was started nearly 100 years ago by Meitaro Takeuchi," said Maki. "He saw that the copper mine in Komatsu City, Japan, was about to exhaust its resources and close. The city's economy centered around that mine, so he started an equipment manufacturing company to provide new jobs and help people in his community develop new skills."



PRODUCT IMPROVEMENT



INTUITIVE TECHNOLOGY

Proactive Dozing Control logic interprets data, makes decisions to mirror seasoned operators

When Komatsu unveiled its revolutionary *intelligent* Machine Control system in 2013, the integrated, mast- and cable-free, semi-automated GPS program promised increased production and precision grading. It delivered, and now Komatsu is taking the technology to another level with Proactive Dozing Control logic.

"The first iteration of *intelligent* Machine Control was a starting point," explained Komatsu Product Marketing Manager Derek Morris. "Once that was accepted in the market and became a viable part of a construction site, we focused on how to make it better."

To do that, Komatsu designed its Proactive Dozing Control system to more closely resemble an experienced operator during initial rough-cut applications – a point when operators were not utilizing *intelligent* Machine Control.

"Traditionally, end users were only using automation to perform final grade," noted Morris. "That happened because the system would work to get the blade to grade as soon as possible, creating aggressive cuts that could stall a machine. During that phase, experienced operators would typically cut and carry large but manageable loads, so they could move the material to other parts of a jobsite. We added this logic and practice."

The result is an intuitive technology that delivers productivity gains of within 6 percent of an experienced operator.

"Proactive Dozing Control logic tracks, collects and interprets terrain data and then makes decisions based on that information," said Morris. "It can now calculate when to cut and when to carry material, while also allowing the operator to provide input on

where the blade should be based on existing ground. The new system enables the operator to use automatics in applications such as stripping topsoil or spreading fill."

'Grass to grade'

With Proactive Dozing Control logic, operators are able to use the technology at all times, boosting efficiency and productivity.

"Using machine control exclusively for fine grading meant it was utilized only 10 to 20 percent of the time," said Morris. "Proactive Dozing Control logic gives Komatsu *intelligent* Machine Control dozers grass-to-grade automatics, which delivers greater return on investment."



Derek Morris, Komatsu Product Marketing Manager

Available on new Komatsu D51i-24 and D61i-24 dozers, the latest version of *intelligent* Machine Control improves automation during rough-cut applications by more closely operating like an end user. "Proactive Dozing Control logic tracks, collects and interprets terrain data and then makes decisions based on that information," said Komatsu Product Marketing Manager Derek Morris.





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WASTE EXPO DRAWS CROWDS

Solutions and support for rugged landfill operations showcased in Las Vegas

Companies from across the country gathered in Las Vegas for the 2019 Waste Expo to see the latest innovations for the waste management industry. Educational sessions and networking opportunities supported the exhibit area where customers met with manufacturers and inspected machines.

At the Komatsu America booth, attendees could visit with company representatives to learn about new solutions for the industry.

"We're building strong relationships with our waste-market customers and developing the machines that meet their applications," said Komatsu America Chairman and CEO Rod Schrader. "Then, in partnership with our dealers, we support them very effectively with local service and parts departments."

Customer success

Waste industry professionals who utilize Komatsu products note the positive impact the equipment has made on their operations.

"We recently switched to Komatsu and, in the past year, have added more than a dozen machines, including excavators and wheel loaders," said DTG Recycling Group COO Tom Vaughn. "The maintenance support has been fantastic."

Andrew Springer with Sun Recycling in Beltsville, Md., relies on Komatsu equipment for the company's roll-off dumpster hauling and C&D recycling operations.

"We run Komatsu wheel loaders and excavators exclusively," noted Springer. "Our environment is very rough on machines, and they stand up to the test. The most critical piece has been the dealer support in getting the parts we need, when we need them."

Komatsu featured two industry-specific machines, the D85PX-18 dozer outfitted with a waste package and the WA380-8 wheel loader with waste-handling capabilities. Both offer solutions for landfill operations.

"The D85PX-18 dozer is fully equipped and ready to push trash," noted Komatsu America Marketing Engineer Scott Ruderman. "It features an 18.4 cubic-yard blade with a trash rack to handle the lighter material and 30-inch track pads with clean-out holes for easier maintenance. The engine compartment is sealed, and the exterior hoses have been removed to prevent debris from contacting or damaging critical components."

Komatsu designed the WA380-8 wheel loader to be ready for harsh applications as well.

"We fully protect the bottom of the machine using a front frame underground, powertrain guard, fuel tank guard and axle seal guards," noted Ruderman. "Due to market demand, we've developed a guard that protects the fan cooling unit and rear grill from contact as well. The machine also has a corrugated screen outside of the intake system to prevent debris from entering the engine system."



Rod Schrader, Chairman and CEO, Komatsu America

The 2019 Waste Expo featured the latest innovations in the waste management industry, including a fully guarded Komatsu WA380-8 wheel loader and D85PX-18 dozer outfitted with a waste package.



A CLOSER LOOK



HANDS-ON EXPERIENCE

Komatsu revamps Demo Days to provide ultimate customer event



Isaac Rollor, Komatsu Instructor and Developer

This spring, more than 300 customers, distributor representatives and industry professionals attended Komatsu's Demo Days at the Cartersville Customer Center in Georgia where they experienced a newly tailored schedule for the event.

"We've been using this site for more individualized customer demonstrations, and we learned a lot from them," said Komatsu Instructor and Developer Isaac Rollor. "We applied a good deal of the feedback we received from those interactions to enhance this group event. As a company, Komatsu is always looking to improve in all aspects, and that includes Demo Days."

Komatsu Demo Days attendees had the opportunity to operate 30 machines, including the new GD655-7 grader and the full line of *intelligent* Machine Control equipment. The event also featured walk-arounds, competitions, a factory tour and other interactive sessions.



The new format significantly increased attendees' time at the demo site. The morning session featured walk-arounds for 30 machines, including the full family of *intelligent* Machine Control dozers and excavators, with Komatsu experts onhand to answer questions.

"After registration and a short safety meeting, we got customers up on the hill," said Rollor, referring to the demo site location. "In the past, we held the morning session in our auditorium, but we want Demo Days to be as interactive as possible. We felt it was important to increase the amount of individualized time customers spent with our people and on the machines to achieve that goal."

Food trucks, raffles and competitions

The morning ended with an *intelligent*Machine Control dozing demo, and then
Atlanta-area food trucks provided lunch. The
afternoon was reserved for machine operation.

"By the time customers go home, we want them to feel as confident with the Komatsu product as we are," noted Rollor. "This new setup provides more time for them to talk with Komatsu personnel, operate equipment and have all of their questions answered."

In addition to machine demos, the gathering also featured raffle prizes; timed wheel loader and mini excavator challenges; and a factory tour of Komatsu's Chattanooga Manufacturing Operation. Demo Days also included a "Help Build the Machine of the Future" area, which invited customers to share what they want to see from Komatsu in five, 10 and 15 years. ■

MORE INDUSTRY NEWS

Largest autonomous truck now operating in Canadian oil sands

Komatsu's biggest autonomous ultra-class haul truck is now in operation, moving materials at an oil sands operation in Canada. With a 400-ton capacity, the new 980E-4AT builds on Komatsu's 930E Series and is one of the world's largest autonomous haulers.

The 980E-4AT has a 3,500-horsepower, 18-cylinder engine with a reliable hydraulic design. It also features a two-stage turbocharging system to maximize fuel efficiency.

Komatsu introduced its Autonomous Haulage System (AHS) more than a decade ago; then, in late 2018, it reached 2 billion tons hauled with its autonomous trucks. There are more than 130 AHS Komatsu trucks in operation worldwide.

"The introduction of these 980Es into the AHS environment was possible thanks to our customers and distribution partners," said Dan Funcannon, Vice President/General Manager, Large Mining Truck Division. "They're a big reason why Komatsu has the most autonomous systems, in the most mines, hauling the widest variety of material in the world."



SERVICE NEWS

HIGH-HEAT PROTECTION

Specially formulated HO56-HE hydraulic oil helps solve oil degradation in hot environments



Bruce Gosen, Senior Product Manager, Komatsu Parts Marketing

Using the proper fluids delivers bottom-line benefits, potentially increasing productivity and lowering operating costs. "Fluids designed to match the conditions you face offer the best protection, resulting in less downtime and extended equipment life," said Bruce Gosen, Senior Product Manager, Komatsu Parts Marketing.

Gosen pointed out that Komatsu's HO56-HE hydraulic oil is a good example. It is a zinc-based, anti-wear oil made from synthetic fluid, as opposed to traditional hydraulic fluids created from mineral oil. "This product is specially formulated to help solve oil degradation issues in hot environments," explained Gosen. "It's an ideal choice for equipment operating in desert regions or in high-temperature industrial facilities."

Specific benefits of HO56-HE:

 It has outstanding cold-start performance and excellent resistance to oxidation at high temperatures.

- It is specially formulated to maintain viscosity range throughout the full life of the fluid.
- The fluid performs with greater efficiency to reduce fuel consumption and extend oil drain intervals.
- It prevents valves from sticking, resulting in less "reactive maintenance" downtime.

"HO56-HE is more energy-efficient, so it can reduce overall fuel costs compared to conventional anti-wear hydraulic fluids," said Gosen. "HO56-HE has the potential to last longer too, reducing downtime for routine oil drains.

"It's compatible with most machines, so many companies can consolidate multiple hydraulic oils across their fleets, simplifying ongoing maintenance, which can lead to greater savings," Gosen added. "We encourage anyone needing a high-performance hydraulic oil to contact their distributor for HO56-HE."





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2015 Komatsu WA470-7



2016 Komatsu D51EXi-22



USED EQUIPMENT FOR SALE

YR	MODEL	HRS	S/N	PRICE			
WHEEL LOADERS							
2015	Komatsu WA470-7	2,814	AA47182	\$199,500			
2015	Komatsu WA380-8	2,409	15090	\$159,500			
2014	Komatsu WA320-7	2,501	80428	\$99,500			
2015	Komatsu WA380-7	2,725	A64549	\$155,000			
2013	Komatsu WA320-7	4,803	80043	\$84,500			
2013	Komatsu WA470-7	4,815	10087	\$169,500			
2016	Komatsu WA470-8	2,580	100008	\$237,500			
EVGAVATORS.							
EXCAVATORS							
2014	Komatsu PC290LC-10LF	1,975	A25844	\$165,000			
2012	Komatsu PC360LC-10	4,807	70043	\$122,500			
DOZERS							
2016	Komatsu D39PX-12	975	901812	\$139,500			
2014	Komatsu D65EX-17	3,925	2378	\$165,000			
2014	Komatsu D65PX-17	2,604	2270	\$215,000			
MOTOR GRADER							
	MOTOR	GRADI	EK				
2011	Komatsu GD655-5	2,570	55288	\$155,000			
FARESTRY							
FORESTRY							
2015	Komatsu XT445L	3,450	A3119	\$369,500			
INTELLIGENT MACHINE CONTROL							
2016	Komatsu PC360LCi-11	950	90233	\$269,500			
2016	Komatsu D51EXi-22	1,164	B14025	\$159,500			

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