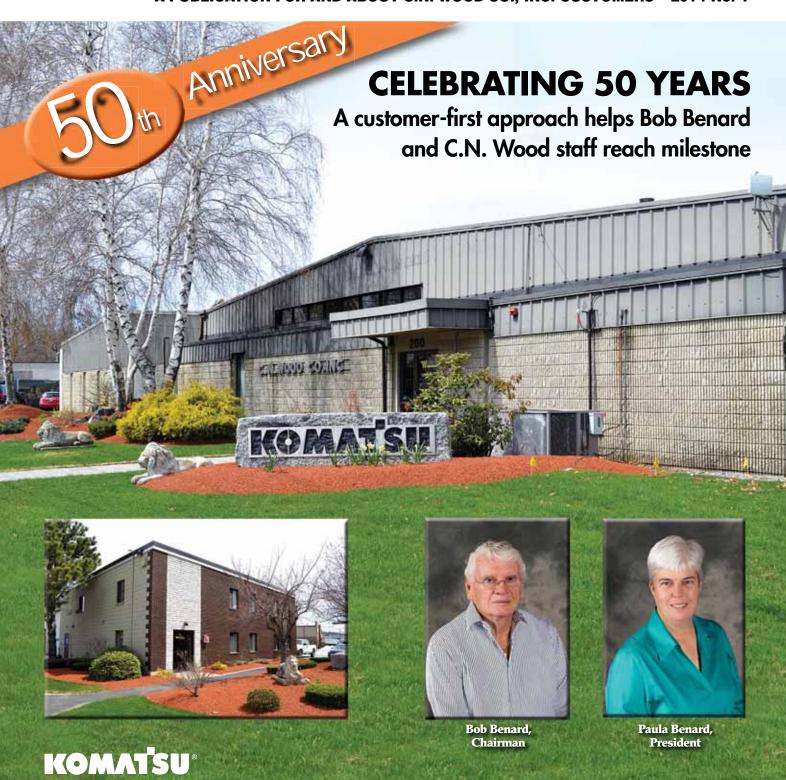
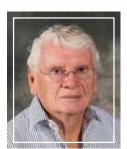


HOOD WORKS

A PUBLICATION FOR AND ABOUT C.N. WOOD CO., INC. CUSTOMERS • 2014 No. 1



A MESSAGE FROM THE CHAIRMAN & PRESIDENT



Robert S. Benard



Paula F. Benard

Celebrating 50 Years





Tel. (781) 935-1919 Fax (781) 937-9809

Dear Valued Customer:

For many of you, 1964 probably seems like a long time ago. Some of us, however, remember it well. The Beatles on Ed Sullivan, Cassius Clay (pre-Muhammad Ali) defeating Sonny Liston, the first Ford Mustang and the New York World's Fair.

I remember 1964 because it's the year I started working at C.N. Wood and putting together a plan to buy the company, which, at the time, consisted of a handful of people at one store selling one product – snow removal equipment. Now, we have 120 people at six locations representing more than a dozen leading equipment manufacturers for industries from construction to agriculture to recycling and more.

In this issue of your C.N. Wood *Wood Works* magazine, we take a look back at the last 50 years. Of course, it was enjoyable reminiscing about the past, but at C.N. Wood, we are much more focused on the present and the future. Our goal is to figure out better ways to meet your needs, whether through the products we carry or the support we provide.

One of the products making a big difference for many of our customers is the new Komatsu lineup of *intelligent Machine Control* dozers. We feature an article about them in this issue of *Wood Works*. The machines come equipped with automatic grade control systems integrated into the dozers rather than added-on separately, and they are unlike anything else on the market.

All of us at C.N. Wood want to thank you for your support. It's because of customers like you that we've become the company I envisioned when I started this journey 50 years ago. As always, service remains our top priority, so if there's anything we can do for you, please call or stop by one of our locations and let us know what you need. We'll be happy to help in any way we can.

Sincerely,

C.N. WOOD COMPANY, INC.

Robert S. Benard Chairman Paula F. Benard President

Paul F Lenan



WOOD WORKS

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Read how new Tier 4 Final machines improve efficiency while maintaining Komatsu's strong work ethic.

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WOBURN, MA

200 Merrimac Street • Woburn, MA 01801 (781) 935-1919 • FAX: (781) 937-9809

WHATELY, MA

P.O. Box 222 • 102 State Road • Whately, MA 01093-0222 (413) 665-7009 • FAX: (413) 665-7277

IOHNSTON, RI

60 Shun Pike • Johnston, RI 02919 (401) 942-9191 • FAX: (401) 942-9266

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Dana MacIverV.P. & Chief Operating Officer

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Jim Maxwell General Manager

PARTS

Jeff Sullivan Parts Manager

Bruce Rushford Johnston Store

Butch Wickline Whately Store

> **Dave Ryan** Avon Store

PRODUCT SUPPORT

Mark Whelan Service Manager -Construction Products

Phil Hoffman

Assistant Service Manager - Construction Products

Michael Galambos

Service Supervisor -Environmental Products



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CELEBRATING 50 YEARS

A customer-first approach helps Bob Benard and C.N. Wood staff reach milestone



Bob Benard, Chairman



Paula Benard, President

Even as Bob Benard looks back on 50 years in business, he continues to look ahead. After all, reaching your Golden Anniversary takes more than just resting on what you've already done and built. It takes foresight and determination, and the Chairman of the Board of C.N. Wood has shown plenty of that.

"I've always believed that growth is healthy and necessary," said Benard, who along with Paul McCarthy, started operations at C.N. Wood in 1964. "That ideal led us from a small single-focus business into a multiline dealer. We have faced challenges along the way. Everyone deals with them in this business. But, we have treated our customers honestly and fairly and have proven to them that we're looking out for their best interest, and in turn, we have grown."



C.N. Wood is headquartered in Woburn, Mass. C.N. Wood companies have six locations and employ about 120 people.

Woodco Machinery, C.N. Wood's partner company, is also located in Woburn, Mass. It represents the full line of Volvo products, including earthmoving, waste handling and paving equipment.



Benard and McCarthy, who Bob bought out several years ago, decided to go into business for themselves after Benard quit his previous job selling equipment. Right before that move, Bob spent 11 months in a hospital battling tuberculosis, where he came to the conclusion that he needed to make a change.

"I wasn't happy with the direction things were going, so I made up my mind to either work for another dealer or go out on my own," he recalled. "I quit not long after getting out of the hospital, even though I didn't have anything else in the works. I stopped at another dealership on the way home from quitting and was offered a position, but I didn't commit to it right then."

A long-tenured staff

That night, McCarthy, who worked with Benard at the same company, called and asked him what his plans were. The next morning they talked about possibilities and decided to call on Charlie Wood, the owner of C.N. Wood.

"Charlie was about the same age that I am now and didn't have any family in the business, so he was open to our conversation and ideas about buying him out," said Benard. "We started working at C.N. Wood and paying Charlie. Eventually, we put the money together with the help of family members and a banker willing to take a chance, and bought it outright. Paul was a tremendous partner and asset to the business, helping build and shape the foundation of what C.N. Wood has become. At the time we started, the company only sold snow removal equipment, and we had only a handful of people."

One of those employees was Buddy Barrelle, who remains with C.N. Wood today and is



Albanese Brothers, Inc. used a Komatsu PC308 excavator on a sewer and water-line job in Saugus, Mass. "I love the tight-tail-swing PC308," said VP Oto Albanese. "It's great on road jobs because it's got good size but can swing safely with traffic in the next lane.

the company's Vice President. He has served as a technician, service manager and sales representative during his tenure.

"Bob asked me 50 years ago if I'd stay on temporarily after he and Paul took over, and I'm still waiting for him to make it permanent," Barrelle joked. "In all seriousness, Bob's leadership, visionary tendencies and commitment to our customers and the employees at C.N. Wood helped this company become a leader in the industry. He always emphasized that taking care of people, whether it's customers or staff members, is key to success. We have customer relationships that go back decades, and several employees have been here 20 years or more. Everyone respects Bob and how he's built an organization that values employees, whether they have been here 50 years or just started yesterday."

Today, C.N. Wood companies employ about 120 people at their six locations: Westbrook, Maine; Johnston, R.I.; Avon and Whately, Mass.; New Haven, Conn.; and Woburn, Mass., which is C.N. Wood's headquarters and also home to partner company Woodco Machinery.

Among the group of individuals who have long-term status with C.N. Wood are Bob's daughter Paula Benard, President of the company, and his son-in-law Dana MacIver, who is CEO of C.N. Wood and COO of



(Sitting) Paul Alagna, Shipping and Receiving, consults with PSSR Sam McRell. (Below) Alagna prepares a shipment from C.N. Wood's vast inventory.



Woodco Machinery. Others include General Manager Jim Maxwell, Vice President Dick Thomas, Sales Representatives Bob Rosa and Steve Russell, Parts Manager Jeff Sullivan,

Continued . . .

C.N. Wood customers are "Never Alone"

.. continued



Dana MacIver, CEO and Woodco Machinery COO



Buddy Barrelle, Vice President



Jim Maxwell, General Manager

Waste Support Services uses a Komatsu WA500 at its transfer station in Peabody, Mass. "It's a heavy, powerful machine," said Operator Eric DiFava. "It's an awesome unit in this application."

Environmental Sales Manager Tom Fiore and Jo-Anne Giordano, who handles Accounts Receivable.

"Our employees come to work every day with the attitude of doing whatever it takes to please the customer," said Paula Benard. "Sometimes that means taking calls at odd hours, such as nights and weekends. We had an old slogan that's still appropriate: "Never Alone." It signifies that C.N. Wood is always available to help out in a time of need, and we practice that every day. We view ourselves as loyal partners in our customers' businesses, whether that's contractors putting pipe in the ground or municipalities that have one of our sweepers or refuse trucks. No one can afford downtime, so we do everything within our power to ensure that's minimized."

Top-of-the-line products

One way C.N. Wood minimizes downtime is by carrying top-of-the-line productive, efficient and reliable equipment. The list of manufacturers and industries the company represents has vastly changed over 50 years. C.N. Wood went from strictly carrying snow removal equipment to becoming a multifaceted dealer serving residential and commercial construction, landscaping, agriculture, municipal and governmental entities, demolition, energy, highway construction and paving, infrastructure, manufacturing, recycling and scrap, utility and waste handling.

"One of the first lines we added was Elgin Leach, and that eventually led to us carrying street sweepers," said Bob Benard. "We still carry Elgin products today. Our first loader line was Trojan, and then we took on Clark Michigan in the early 1970s. During that time period, we added Link-Belt cranes and excavators as we became a more full-service dealership. In 1980, Komatsu approached us about becoming a distributor for its crawler dozers, which we lacked at the time."

Equipment lines expand

Taking on the crawler dozers led to excavators and eventually the entire Komatsu product line. C.N. Wood remains the exclusive distributor for Komatsu machinery in Massachusetts and Rhode Island. It also carries environmental, road maintenance and municipal equipment in those states, as well as in Connecticut, New Hampshire, Maine and Vermont.

"Our customers run the gamut, from municipalities to earthmovers to material handlers to demolition contractors, you name it," said Paula. "In order to meet their needs, we've aligned ourselves with what we believe are the best manufacturers in the industries they serve. As far as I'm concerned, our product lines are unrivaled. They're productive, efficient and reliable, which is what our customers expect."

In addition to Elgin and Komatsu, manufacturing lines include Gradall excavators, NPK demolition attachments, the full line of BOMAG products, Madvac sweepers and vacuums, Mustang skid steers and track loaders, New Way refuse trucks, RapidView pipeline inspection and rehabilitation equipment, Rogers trailers, SENNEBOGEN material handlers, Trackless municipal tractors and Vactor sewer cleaners. Woodco Machinery represents Mauldin and Carlson paving products, as well as Volvo earthmoving, waste-handling and paving equipment.

"I find great satisfaction in knowing that we are a one-stop shop that can handle nearly any sales, rental, parts or service need," said General Manager Jim Maxwell. "For instance, we have one customer that looks to us for trash trucks and equipment for its transfer station operations; excavators, loaders and dozers for its site development side; and large loaders and mobile crushers for its aggregate business. Our philosophy in taking on a manufacturer's





NASDI, a Waltham, Mass., demolition/deconstruction company, used a Tier 4 Interim PC490LC-10 for a 2012 demolition project at St. Elizabeth Medical Center in Brighton, Mass. NASDI purchased this machine, along with several others, from C.N. Wood.

product line has always been to carefully select those we believe offer the highest quality and greatest value."

CEO Dana MacIver acknowledged that reaching 50 years in business is about more than just having good equipment. "Bob has always emphasized that customer satisfaction is paramount. It involves getting to know customers' businesses so we can match their needs with the right machinery, then having exceptional parts and service support to back it up."

Well stocked

Parts Manager Jeff Sullivan started with C.N. Wood in the early 1980s, left and then came back at the request of the company. He's seen the company's parts inventory expand considerably over the years.

"I started at the old Watertown location and worked at the company for 19 years, before leaving for family reasons," said Sullivan.

"After a decade with the company I worked for, I was laid off. I ran into a C.N. Wood technician and told him what had happened. Within hours, C.N. Wood called and offered me an open position at its branch in Woburn, which is where I live. I think that says a lot about Bob and the company. After being gone a decade, he

still respected what I did at the time I worked for C.N. Wood and why I left, and he was willing to bring me back.

"He and everyone else at the company places a high priority on respecting customers and their time," Sullivan added. "That's why we continue to build a parts inventory designed to minimize downtime. In most cases, a part is on the shelf when a customer needs it, but if not, we can get it from another branch or directly from the manufacturer the next day. There have been times when that wouldn't do because having a part immediately was critical. Bob would say, if it's necessary, take the part off a machine out back and get it to the customer. Or, if it's at another branch, go get it, and deliver it."

Maximizing customer productivity

Parts go hand-in-hand with service capabilities. C.N. Wood is expanding its infrastructure to further ensure it's meeting critical service needs, both in the field and in the shop. It's currently adding 9,000 square feet of space to its Woburn facility. When done, the shop will have six drive-in bays and a 10-ton overhead crane.

"The importance of meeting our customers' service needs can't be stressed enough," said



Jeff Sullivan, Parts Manager

Good equipment and customer satisfaction is paramount

.. continued

The Braintree Highway and Water & Sewer departments use a Vactor 2100 to flush out sewer mains and vacuum debris from the sewer system.





C.N. Wood displayed a Vactor 2100 sewer cleaner, a Komatsu WB156 backhoe loader, a Trackless multipurpose machine and an Elgin sweeper at the 2009 Massachusetts Highway Association's New England Public Works Expo.

 $\ensuremath{\text{C.N.}}$ Wood provides refuse and recycling bodies, along with other waste-handling equipment.



Paula Benard. "Having adequate facilities is essential, but what's even more critical is the talented personnel we have, who know how to get the job done. Equipment has changed dramatically in 50 years, especially in the last decade with newer technology. Training is a crucial tool that ensures our technicians know how to diagnose and fix an issue efficiently.

"We take training beyond the technician level so that our parts and sales teams are well-versed and up-to-date too," she added. "Training is something that we've always focused on and will continue to emphasize. If our personnel understand the products they're representing, they can help customers get the most benefit and maximize their uptime, productivity and efficiency while lowering their owning and operating costs."

Respecting people

Helping customers maximize their equipment investment has always been a hallmark of C.N. Wood, according to Vice President Dick Thomas who oversees areas such as finance and insurance. He started with the company in 1972 and has seen many changes that directly benefit customers.

"In the early days, customers had few options for financing – basically just a handful of banks and finance companies," said Thomas. "Today, manufacturers offer programs and incentives that give customers more flexibility in rates and terms. Financing is now available for parts and service that allows customers to get repairs done without putting down a large chunk of capital all at once. Those types of programs tie in well with C.N. Wood's philosophy of doing whatever is necessary to help customers get the most value out of their equipment and maximize their profitability.

"Bob has always had a knack for finding creative solutions that are equitable for all parties," he added. "Many customers have survived and thrived thanks to Bob's willingness to commit to their success. The same can be said for the way he values employees. He has helped many of them during times of need. People remember when you treat them with respect, dignity

Continued . . .

C.N. Wood gives customers more than they expect

.. continued

and honesty. It's why we have so many loyal employees and customers alike."

A great legacy

A focus on giving customers more than they expect has always been a guiding principal of Bob Benard's, and he's passed that on to the staff at C.N. Wood. "As anyone in this business knows, everything is dependent on satisfied customers," said Barrelle. "If you take care of them, and they trust you, long-term relationships form. We're honored that much of our business comes from repeat customers, many of whom were able to get started and grow thanks to Bob's willingness to take a chance that they would be successful. I'm proud to have been here 50 years and be a part of such a great organization."

Paula Benard said that her father's teaching will carry C.N. Wood forward. "Even as he approaches 80 years old, he's still active in the business. The knowledge and wisdom Dad has passed down is invaluable. I remember in college struggling with the difference between the diesel cycle and gasoline cycle, and he took the time to explain how they worked. He's always been able to bring clarity to any

Standing in front of the entrance to C.N. Wood's Woburn facility in 2002 are (L-R) now-CEO Dana MacIver, President Paula Benard, Administrator Paula Piper and Chairman of the Board Bob Benard.



situation. That includes issues that pop up from time to time. Dad has a knack for finding a quick, fair resolution. It's another reason why customers and employees respect him so much. He's built a great legacy on which we continually build as we look to the future."

"Machinery changes, technology changes and the industry goes through ups and downs along with the markets, but dealing honestly with people and earning their business is constant among all the change," Bob added. "That ideal helped us stay in business for 50 years and build a list of not just customers, but friends. It will lead C.N. Wood long after I'm gone. I don't plan for that to be anytime soon, but I know when the time comes, it's in good hands. I still enjoy the business and would do it all again." ■

Additional photos by Donna DiSimone Photography.



Service Manager-Construction Products Mark Whelan (sitting) and Assistant Service Manager Phil Hoffman provide product support for C.N. Wood customers.

(L-R) C.N. Wood's parts staff includes Kevin Lanigan, Pat Burke, Jessica Lanigan and Martin Merva.



















EARTHMOVING, DEMOLITION, AND MATERIAL HANDLING ATTACHMENTS & EXCAVATOR CUSTOMIZING























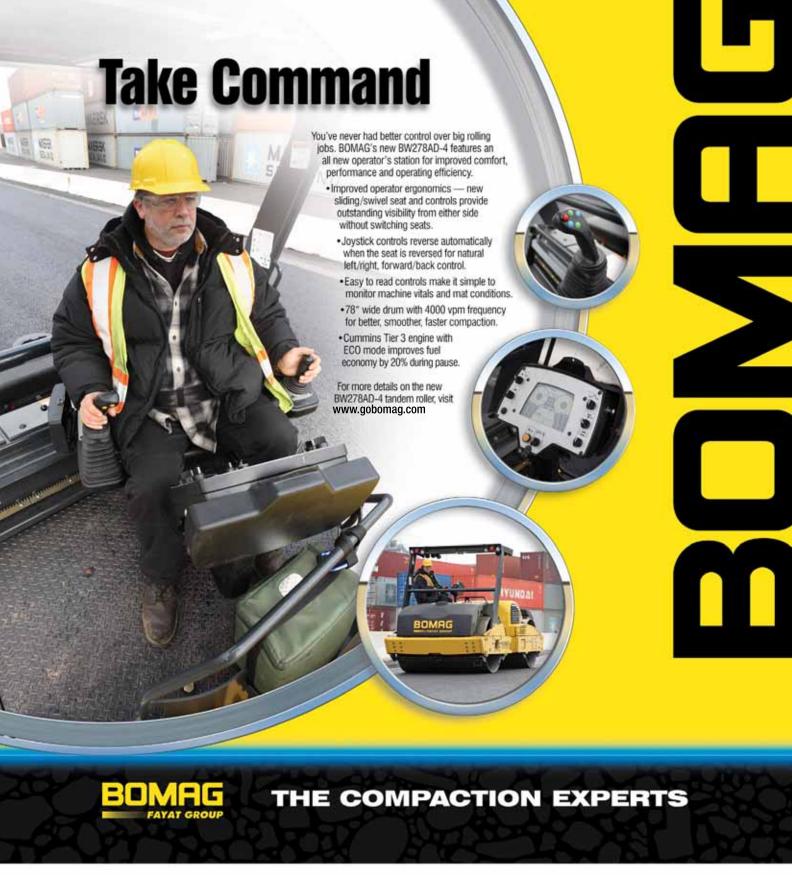












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KEEP ALL OPTIONS OPEN

Report highlights HTF shortfall, need to find alternative revenue streams



Christian Klein, AED Vice President of Governmental Affairs

In February, the Congressional Budget Office (CBO) updated its biannual projections of the Highway Trust Fund (HTF) cash flow, estimating that the HTF will run out of money before MAP-21, the 2012 highway funding bill, expires on September 30, 2014.

The CBO also said that HTF revenues (gas tax, diesel tax, etc.) will fall more than \$100 billion short of the amount needed just to keep annual highway investment at current levels (roughly \$40 billion) over the next six years.

The CBO analysis confirms the findings of last year's Associated Equipment Distributors (AED) study on the HTF. The 2013 study, which was commissioned by the association and conducted by researchers at William and Mary's Thomas Jefferson Program in Public Policy, found that the HTF deficit will amount to \$365.5 billion by 2035. The report also proposed bold solutions:

A Congressional Budget Office (CBO) projection estimates the Highway Trust Fund will run out of money before MAP-21, the 2012 highway funding bill, expires on September 30, 2014. AED is encouraging lawmakers to keep options open regarding increased revenues and solid solutions to long-term HTF funding.



increasing the gas tax to 25 cents per gallon and indexing it for future inflation, which would raise \$167 billion more than current baseline spending requirements during the next two decades.

"The CBO report is no surprise," said AED Vice President of Government Affairs Christian Klein. "This is just another in a series of countless wake-up calls about the highway funding crisis. Unfortunately, lawmakers are continuing to hit the snooze button. That simply can't continue. There's too much at stake for the economy and the construction industry."

As the newest CBO numbers indicate, it is vital that our nation's leaders act now to maintain the HTF's solvency. House Transportation & Infrastructure Chairman Bill Shuster, R-Penn., stated he would not pursue a federal gas tax hike and would instead favor a vehicle-miles traveled (VMT) fee to support the federal highway program in the upcoming highway reauthorization debate.

A VMT fee has been studied at the state level, and most experts agree that the best long-term solution for the HTF is to tie revenue to road usage, not fuel consumption. But it is unclear how such a federal program would be structured given privacy concerns. Experts also point out that it would take considerable time to implement a VMT system and that money wouldn't start flowing in quickly enough to address the HTF's immediate needs.

AED commends Chairman Shuster for proposing options to ensure the HTF's long-term solvency and also believes all options must remain on the table to ensure our nation's transportation networks have the resources they need to create jobs, grow the economy and ensure America's competitiveness for generations to come. ■



CONEXPO RECAP

Nearly 130,000 see latest innovations in construction equipment, technology at industry's premier event

CONEXPO-CON/AGG attracted nearly 130,000 visitors during its five-day run at the Las Vegas Convention Center, marking the second-largest attendance in the equipment exhibition's history. The number of attendees increased significantly compared to 2011, which was the last time the triennial event was held. Only CONEXPO 2008 had a larger number of people in attendance.

A record 31,000 international attendees came for the show, which also set a new mark for

Educational seminars gave attendees valuable information about best practices and technology that could make them more efficient, productive and profitable. Industry professionals, such as Komatsu's Jason Anetsberger, Product Manager, Intelligent Machine Control, conducted the sessions.



Komatsu personnel were available to answer visitors' questions.



exhibitor space and exhibitors. Indoor and outdoor displays totaled more than 2.3 million net square feet, with 2,000 exhibitors on hand. CONEXPO-CON/AGG was co-located with the International Fluid Power Exposition (IFPE), which added more than 161,000 square feet of exhibit space and 400 exhibitors.

"CONEXPO-CON/AGG and IFPE 2014 reflected the feeling of momentum that's building in the industry," said IFPE Show Director Melissa Magestro. "We are industry-run shows that put industry needs first; these show numbers are a testament to the value that attendees, exhibitors and other stakeholders derive from participating in the event."

Komatsu had one of the largest display areas, showcasing 24 construction, forestry and forklift products that fit the theme of "Innovative, Intelligent, Integrated."

Komatsu displayed its family of *intelligent Machine Control* (iMC) dozers that feature integrated machine control technology. A dedicated theater presentation showed how iMC dozers provide automatic grading from rough-cut to finish grade without using traditional add-on masts and cables. User testimonials highlighted the advantages of iMC dozers, such as automatic blade control and reduced track slip for more efficient and effective dozing.

"We introduced our first iMC dozer about a year ago, and the feedback has been extremely positive," said Rich Smith, Vice President ICT Business Division and Product Marketing. "CONEXPO is a good place to introduce the newest *intelligent Machine Control* dozers, as well as our extensive list of other new products."

Komatsu also presented its new thirdgeneration Hybrid HB215LC-2 excavator. In 2008,



Komatsu introduced the first hybrid excavator and has since sold more than 2,500 worldwide.

"CONEXPO provides a tremendous opportunity for owners, operators and other construction personnel to see the latest in equipment and the technology that's driving the industry forward," said Rod Schrader, Komatsu Chairman and CEO. "CONEXPO allows us to show how Komatsu is refining machines to transform the workplace of the future."

Komatsu introduced several new Tier 4
Final products, including dozers (D155AX-8
and D65EX-18), excavators (PC490LC-11,
PC240LC-11, PC88MR-10 and PC55MR) and
an HM300 articulated dump truck. It also
displayed a Tier 4 Final engine, so attendees
could see the innovative way Komatsu meets
emissions standards while providing greater
machine efficiency. Komatsu's Tier 4 Final engine
technology builds upon the strength of its proven
Tier 4 Interim foundation, integrating Selective
Catalytic Reduction (SCR) that further reduces
NOx emissions.

Additional excavators, wheel loaders, an HD605-7 rigid dump truck, a PC390LL-10 track log loader and an FH45-1 hydrostatic forklift rounded out the displayed equipment. Presentations throughout the show; a large video screen with Komatsu information

Continued . . .

Komatsu displayed the technology behind its Tier 4 Final engines, including the selective catalytic reduction components (inset) that reduce emissions to near zero.





Go online or scan this QR code using an app on your smart phone to watch video.

Komatsu products: "Innovative, Intelligent, Integrated"

.. continued

CONEXPO Conversations



Jeff Jordheim,
Co-Owner, East &
West Excavating,
Fargo, N.D. "This is
my second CONEXPO.
I come to see the new
products and learn
from what's here."



Alan Wright, Vice
President, Clearwater
Utilities and ClearPave
Construction, Houston,
Texas. "We wanted
to see the latest
equipment. We get
busy with our projects
in the field, and this
was a good time to
come out and spend
a day or two to see
what's new."



Shane McDonald,
Owner/President,
AGR Contracting,
Monroe, Wash. "I've
learned a lot about
Komatsu's intelligent
Machine Control on
the dozers. We own a
mixed fleet, but this
iMC really sparks my
interest."

and testimonials; a parts, Komatsu CARE, ReMarketing and KOMTRAX information area; and a merchandise store were all part of the company's 40,000-square-foot exhibit space.

More than 1,000 new products, services

CONEXPO organizers estimated that more than 1,000 new products and services were on display during the show. Among the new features was a Platinum Lot for asphalt production/paving, aggregate processing and drilling equipment, a Demolition & Recycling Exhibits Pavilion sponsored by the Construction Materials Recycling Association and a Technology & Construction Solutions Pavilion from the Associated General Contractors of America. The Power Transmission Distributors Association also had an exhibit pavilion for sensor manufacturers and product suppliers.

CONEXPO introduced a campaign aimed at raising awareness of the construction industry's accomplishments, publicizing the positive benefits of construction projects and how they can elevate the nation's quality of life. Many projects were nominated, and 50 were recognized during an Innovation Awards

Program and a special "Young Leaders in Construction" event.

Record numbers for educational seminars

CONEXPO-CON/AGG sold a record 41,000 tickets for the educational program seminars, which consisted of 120 sessions that covered 10 targeted tracks, including aggregates, asphalt, concrete, crane and rigging, earthmoving and site development, equipment management and maintenance, business management best practices, work force development, recycling, and preservation and safety. IFPE offered half day "college-level courses," and a new Fluid Power Seminar series.

"The enthusiasm and traffic on the show floor was just incredible," said Megan Tanel, CONEXPO-CON/AGG Show Director. "Exhibitors cited the high quality of attendees; they told us these were serious buyers and reported robust sales, to existing as well as new customers, that exceeded their expectations."

CONEXPO-CON/AGG is slated to return to Las Vegas in 2017. Other upcoming shows include MINExpo, which runs September 26-28, 2016, at the Las Vegas Convention Center. ■

ReMarketing, Komatsu CARE, parts and other information was available within Komatsu's display area.



DASH 10 EXCAVATORS

From Komatsu - The Excavator Experts



Komatsu Dash 10 excavators provide increased horsepower, improved operator comfort and reduced fuel consumption. The excavator experts at Komatsu can help you complete jobs more quickly, while lowering your fuel and maintenance costs.

- Efficient Komatsu Tier 4 Interim engines and advanced hydraulic systems maximize productivity while providing up to 10% lower fuel consumption.
- Enhanced operator environment improves comfort and machine control.
- Komatsu CARE provides complimentary Tier 4 maintenance, including KDPF exchange filters. Contact your Komatsu distributor for details.





KOMATSU EXPANDS DOZER LINEUP

Three new *intelligent Machine Control* dozers provide automatic blade control from the first pass to the last



Peter Robson,
Director,
Intelligent
Machine Control

Komatsu introduced *intelligent Machine Control* (iMC) to the dozer market about a year ago with its innovative D61i-23 model that features fully automatic blade control from rough-cut to finish grade. It's now expanded the lineup with three new dozers – a D51i-22, a D39i-23 and a D37i-23.

All iMC dozers are available in longer track-on-ground standard EX and low-ground-pressure PX versions, which offer flotation and weight distribution options that best match user applications.

"These new dozers feature the same *intelligent Machine Control* technology that made the Komatsu D61i-23 such a success," said Peter Robson, Director, Intelligent Machine Control. "With the

Komatsu's original slant-nose-design dozer is now available in an *intelligent Machine Control* D51i-22 model, along with Tier 4 Interim D39i-23 and D37i-23 machines.



same slant-nose and cab-forward design, they provide excellent visibility to the blade and all around the machine for superior operator productivity. The simple operation, efficiency improvements and greater value reflect the quality that customers expect from Komatsu."

Like the D61i-23, the new iMC models feature fully automatic blade control from initial rough-cut to finish grade. As they travel around the jobsite, the dozers measure actual elevations, which provide accurate surface data. A stroke-sensing angle cylinder measures the actual angle of the blade for high-precision grading accuracy on cross-slope, whether the blade is angled or not. The iMC models are significantly more efficient compared to conventional aftermarket machine-control systems, depending on factors such as operation and conditions.

"During rough cut, if the system senses the blade has excess load, it automatically raises the blade to minimize track slip and maintain forward momentum," said Robson. "The blade also automatically lowers to push as much material as possible, so it's designed to maximize production under all situations."

Operators can select different dozing modes, which tailor the system response to the machine operation, and therefore, optimize performance. Operators can also adjust the blade-load settings to match actual material conditions for added efficiency.

Eliminating the three Cs

Unlike traditional GPS systems, Komatsu's iMC dozers' machine control system components are factory-integrated,



Komatsu's intelligent Machine Control lineup now features four models, including the new D39PXi-23. All have integrated technology that provides automated grading from rough-cut to finish grading.

eliminating the need for masts and cables. A Global Navigation Satellite System antenna is mounted on top of the cab. Additional components include robust stroke-sensing hydraulic cylinders, an enhanced inertial measurement unit with monitor and a controller mounted inside the cab.

"The integrated system reduces maintenance costs as well as risk," said Robson. "Masts are not out on the blade and cables aren't dangling between the blade and the cab, so the chance of damage or theft is eliminated. Personnel don't have to spend time removing and reinstalling those components every day, which increases production. Finally, no one is climbing on the machine or blade to install and remove the mast and cables. We've eliminated the three Cs: cables, climbing and connections.

"We were excited to bring Komatsu's *intelligent Machine Control* technology to the market last year, and the overwhelmingly positive response from our customers

Brief Specs on Komatsu intelligent Machine Control dozers			
Model	Horsepower	Operating Weight	Blade Capacity
D37EXi-23	89 hp	18,872 lbs.	2.5-2.78 cu. yd.
D37PXi-23	89 hp	19,533 lbs.	2.5-2.78 cu. yd.
D39EXi-23	105 hp	20,922 lbs.	2.5-2.78 cu. yd.
D39PXi-23	105 hp	21,848 lbs.	2.5-2.78 cu. yd.
D51EXi-22	130 hp	27,381 lbs.	3.5-3.80 cu. yd.
D51PXi-22	130 hp	29,057 lbs.	3.5-3.80 cu. yd.
D61EXi-23	168 hp	39,441 lbs.	4.5-5.1 cu. yd.
D61PXi-23	168 hp	41,381 lbs.	4.5-5.1 cu. yd.

pushed us to quickly expand this family of crawler dozers," added Robson. "All of the intelligent dozers provide excellent and efficient production in residential, commercial, road building, landscaping and other applications. Customers just have to decide which size or sizes best fit their business."

Continued . . .

iMC dozers eliminate cables, climbing and connections

.. continued

Customers impressed with innovative D61i-23

Komatsu took dozing to a new level when it introduced its first *intelligent Machine Control* (iMC) dozer, the D61i-23, about a year ago. Unlike traditional GPS add-on systems that are typically used for finish grading, the D61i-23 provides automatic dozing from rough-cut to final pass with an integrated system that eliminates masts and cables.

During rough dozing, the automatic blade control monitors the blade load and adjusts the blade elevation to minimize track slip for highly efficient dozing. Closer to finish grade, automatic blade control adjusts accordingly to provide finish-grade performance with high-level precision. The intelligent machines are significantly more efficient compared to machines using add-on control systems.

"It definitely saves us time," said Andy Smith, Operations Manager of Sellers Contracting Services, LLC. "The operator doesn't have to worry about how deep he's cutting. He's not moving his arm up and down trying to control the blade, because the machine does it all for him. From our experience, the accuracy has been dead-on. We've had projects where surveyors check behind us on building pads and even roadways, and it's always been extremely accurate."

Aspen Construction rented a D61i-23 during a road reconstruction project that involved rough cutting heavy peat and placing about 76,000 tons of road base once subgrade preparation was done.

"It powered through the tough materials with minimal track slip, and did a perfect job during the finish portion of placing the road base," said Aspen Construction Estimator/Project Manager Ryan Blank. "It was an amazing machine. We loved it."

Todd Sattler, Superintendent of CL Trucking, likes the accurate grading and the integrated system.

"The biggest advantages with an integrated machine over a bolt-on application are: safety, because no one is climbing on a machine; cost savings, because we won't have broken wires or damaged parts; and time savings, because the time for setup, teardown and redesign on each jobsite is gone," said Sattler. "Now we're able to move the machines around, integrate them quickly to a new jobsite and change operators frequently without any production loss."



Komatsu introduced its *intelligent Machine Control* (iMC) dozer line with the D61i-23 about a year ago. It provides automatic blade control from rough-cut to final pass, with an integrated GPS system that eliminates masts and cables.

Innovative. Intelligent. Integrated.



Next Generation Machine Control

No Masts

No Cables No Connections

Factory installed Intelligent Machine Control — standard on the new D61i-23. Automated dozing —1st to last pass with finish grade performance. Intelligent blade assistance minimizes track slip and improves efficiency.

Komatsu — Customer driven solutions.





Conventional Machine Control

Scan here to see the video.

NEW "BRIDGE" EXCAVATOR

Komatsu PC88MR-10 bridges the gap between compact- and construction-size machines



Rob Orlowski, Product Manager, Excavators

The curtain has dropped on Tier 4 Final, and Komatsu opened its show with a new PC88MR-10 excavator that provides power and production in both open-area and confined-space applications. It has a nearly 10-percent increase in operating weight compared to the previous model.

"Our PC88 remains popular because it is a productive, dependable and efficient machine in construction, utility and landscaping applications," said Rob Orlowski, Product Manager, Excavators. "It's a 'bridge machine'

between compact and construction-size excavators. It works equally well digging close to a building or in a lane of traffic as it does digging a utility line or a foundation without obstructions. In a variety of applications, it maintains excellent lift capacity and stability."

The PC88MR-10 provides a maximum digging depth of 15 feet, 2 inches and a maximum reach of 23 feet, 5 inches. A swing boom allows for work in confined spaces, letting the operator focus on tasks in the front with less worry about counterweight impacts.

Improved versatility and productivity

A new Operator Identification System records and reports key operating information, so owners and equipment managers can more easily track individual operator performance. Operators simply enter a personal ID into the 7-inch, high-resolution monitor that features enhanced capabilities such as an adjustable Auto Idle Shutdown function that helps reduce idle time and operating costs.

Operators have six working modes to match hydraulic power to the job for even greater efficiency. Standard auxiliary flow can be changed to bidirectional for attachment flexibility, and a new enhanced attachment control lets users store up to 10 attachments in the monitor.

"We took what was already a great machine and made it even better with enhancements that can reduce owning and operating costs through increased efficiencies," said Orlowski. "We believe individuals who need a compact excavator that provides powerful performance in a variety of tasks will find the PC88MR-10 a great fit for their businesses."



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- Komatsu CARE provides complimentary Tier 4 maintenance, including Komatsu Diesel Particulate Filter exchange. Contact your Komatsu distributor for details.





MEASURING SUCCESS

VP: Building machines that help customers achieve their goals is what it's all about

QUESTION: Tier 4 Final implementation begins this year. How will you measure these machines' success?

ANSWER: The same way we have with all new tier-level products. First and foremost, that means the machines meet the environmental standards without sacrificing what customers have come to expect from Komatsu equipment: efficiency, production and reliability. Komatsu strives to design and manufacture machines that maintain or improve productivity with increased fuel efficiency at each new level. Our testing indicates the Tier 4 Final machines will continue that trend.

QUESTION: You went beyond the machine. Why?

ANSWER: New regulations bring trepidation to the customer because of the unknown that comes with them. The machines needed additional components and systems to reduce emissions, especially with Tier 4 Interim, which caused concern. To ease those concerns, we introduced Komatsu CARE, a program that provides complimentary scheduled maintenance for the first three years or 2,000 hours, along with two Komatsu diesel particulate filter changes in the first five years. We wanted customers to have every confidence that we stand behind the machines and our technology, plus make their lives easier. The response remains great, and we recently completed the 10,000th service interval under Komatsu CARE, which will continue with Tier 4 Final.

QUESTION: How did you know that customer concern was there?

ANSWER: Because one of our greatest strengths is listening to customers in the field.



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.

Rich Smith, VP ICT Business Division and Product Marketing

In May of 2013, Rich Smith became the Vice President ICT Business Division and Product Marketing for Komatsu's Construction Division. His responsibilities include planning and marketing new products and technologies such as *intelligent Machine Control* (iMC) products and KOMTRAX. He held a similar position in the Mining Division prior to his current role.

Smith is a Peoria, Ill., native and began his Komatsu career on the company's Peoria Manufacturing Operation's (PMO) shipping docks 24 years ago. Komatsu manufactures and ships mining products worldwide from PMO, and Smith gained a wide range of experience working both at and for the plant. He eventually moved into the field as a Technical Support Manager, Regional Service Manager and Field Service Manager, before moving into Product Marketing.

"I grew up in Komatsu; I ran forklifts and cranes, assembled machines and was a CNC machinist," Smith recalled. "From the factory floor, I moved into warranty and contract administration. While most of my career has been on the mining side, I worked with construction as well. Komatsu has allowed me to gain a very well-rounded background. I have been fortunate to have worked with knowledgeable people in a great company. Despite the differences between the two divisions, the desire for customer success remains the top priority of everyone at Komatsu."

Rich returned to school as an adult, while continuing to work full time, to complete a double major. "I believe it was important for me to finish what I started, as well as set an example that education remains valuable at any age," said Smith. "The opportunity to learn and work to personally improve at Komatsu is greatly appreciated."

Customers continue to drive new innovation, features

.. continued



Komatsu Vice President ICT Business Division and Product Marketing Rich Smith says customers helped develop ideas such as its *intelligent Machine Control* dozers, which provide automated grading from rough-cut to finish grade.

The next evolution of hybrid technology is on the horizon, including the third-generation Hybrid HB215LC-2 excavator, according to Rich Smith.



How can we manufacture equipment that meets their needs if we don't communicate with them? That interaction is invaluable and has driven such initiatives as our KOMTRAX Mobile App, which brings critical machine data to a smart phone or other device.

Customers are more mobile than ever, and they want that information at their fingertips. Much of the information that's part of the KOMTRAX Mobile App today came from customers' suggestions. The system has evolved from the basics, such as error codes and hours, to a comprehensive tool with idle times and operational characteristics.

Customers also helped to develop ideas such as our "i" or intelligent machines. While traditional aftermarket GPS grading systems are good, we saw room for improvement, including taking away the masts and cables that can get damaged and have to be taken down and put back up every day. The GPS systems are also designed only for automated finish grading, and customers wanted that benefit from start to finish without the costs associated with maintaining masts and cables. We delivered an integrated system that makes every pass count and works for even the most inexperienced operator. Then, we took it a step further and made sure the dozers have an optimal blade load with minimal track slip, so the added efficiency was built-in. The results and response have been phenomenal.

Again, Komatsu in cooperation with our Distributors, took it beyond the machine by adding Technology Solutions Experts. These highly trained individuals ensure customers get the most out of the intelligent machines, from initial set up to choosing the proper modes for maximum efficiency.

QUESTION: What's on the horizon?

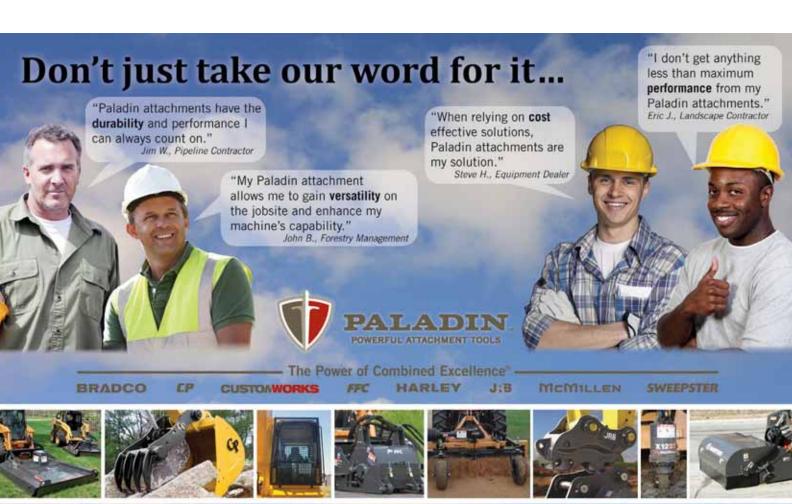
ANSWER: Looking ahead, we see the next evolution in hybrid technology. We were the first to manufacture a hybrid excavator, and soon we'll introduce our third-generation machine. Our customers will continue to guide us – ultimately, we're in the customer success business. In order for them to be successful, we have to make machines that meet their standards. That's what it all comes down to.

Simonson: Jobs to increase, worker availability a problem

The construction industry looks like a good news/bad news scenario in 2014 with more projects to bid, but increased concern over labor availability, according to Associated General Contractors' Chief Economist Ken Simonson. He noted that spending was up 5 percent from November 2012 to November 2013, and expects a 10-percent increase this year.

Simonson sees a double-digit rise in power, manufacturing, lodging and warehouse construction. He expects the same for apartment construction, which will help the private residential market grow by 10 percent or more despite his prediction that single-family home building will stall late this year.

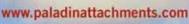
While the construction unemployment rate dropped 10 percent year-over-year in 2013, the industry still has a shortage of available workers. Many left the industry during the recession and haven't come back. "Contractors will likely have to spend more on wages, benefits and bonuses," said Simonson. "Firms that find the additional workers they need may have to increase their payment of overtime wages. As a result, employers' costs for employee compensation...will probably go up 3 to 4 percent in 2014, compared with a 2.1-percent rise from the third quarter of 2012 to the third quarter of 2013." ■











TIER 4 FINAL IS HERE

New machines improve efficiency while maintaining Komatsu's strong work ethic



Bruce Boebel, Senior Product Manager, Tracked Products

A little more than 20 years ago, the government introduced standards designed to reduce emissions through "tier" levels. Each tier brought a new step toward the ultimate goal of reducing particulate matter (soot) and oxides of nitrogen (NOx) to near zero. Tier 4 Final begins this year, and manufacturers are now producing the first wave of machines to meet this new standard.

"Komatsu met each tier-level challenge head-on; in fact, it met or exceeded the standards," said Bruce Boebel, Senior Product Manager, Tracked Products. "In most cases, Komatsu also improved power, production and fuel efficiency at every level."

The biggest challenge came with the jump from Tier 3 to Tier 4 Interim, which required a 45-percent reduction in NOx and a 90-percent reduction in soot. It also required the use of ultra-low-sulfur diesel, emissions filters and Tier 4 specific engine oil. Tier 4 Final requires an additional 80-percent drop in NOx.

"Fluid neutral or better"

Komatsu is using a selective catalytic reduction Komatsu introduced (SCR) system and AdBlue®/DEF (diesel exhaust fluid), which is a mixture of urea and



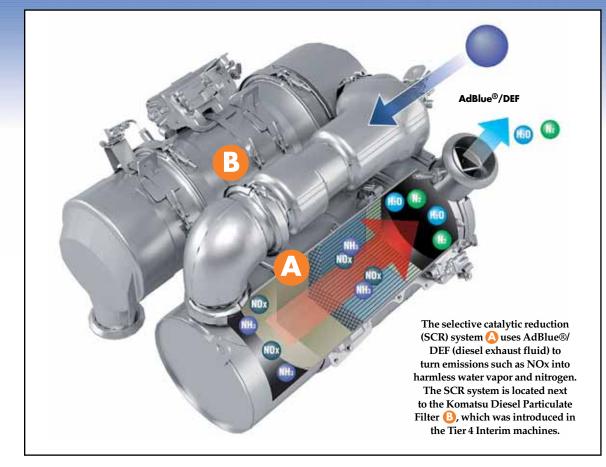
deionized water, to meet the Tier 4 Final regulations to reduce NOx on machines with 75-horsepower engines and above. The SCR system works by injecting AdBlue®/DEF into the exhaust stream as required. AdBlue®/DEF works with the heat of the exhaust and a catalyst to convert NOx into harmless nitrogen and water vapor that expels out of the exhaust pipe. The SCR system is located next to the Komatsu Diesel Particulate Filter, which Komatsu introduced in its construction machines during Tier 4 Interim. Additional components include NOx and ammonia sensors, a mixing tube and a dosing nozzle.

"SCR technology provides better fuel economy than previous models because it treats the exhaust gases outside the engine, uses less exhaust gas recirculation and employs advanced injection timing," said Boebel. "Reducing fuel consumption becomes more significant when you consider that nearly every Tier 4 Final machine across almost all manufacturers requires the use of AdBlue®/DEF. In most cases, with Komatsu equipment, customers are going to use about 2 percent of AdBlue®/DEF compared to diesel fuel.

"When you factor in the fuel efficiency of Tier 4 Final machines, the 100 gallons of fuel burned would be at most 98 gallons," Boebel added. "So, even with two gallons of AdBlue®/DEF, we're 'fluid neutral or better,' which was our goal. In some models, fuel efficiency will be considerably better than neutral. And, since AdBlue®/DEF costs less than diesel fuel, overall fluid cost is reduced in all models."

AdBlue®/DEF tank added

Komatsu added an AdBlue®/DEF tank, along with a supply module that pumps AdBlue®/



Editor's note: Tier 4 Final machines with Komatsu engines less than 75 horsepower won't have the added components and systems of their larger brethren described here. For information on one of these machines, see the article about the new PC88MR-10.

DEF into the SCR system. The tank is vented with a replaceable filter to reduce contamination. It also has sensors to show levels, temperature and fluid quality, as well as an intake suction screen. Komatsu sized the tanks to go a minimum of two fillings of the fuel tank.

"Customers should always use certified AdBlue®/DEF, which meets the ISO 22241 standard and is readily available throughout North America," said Boebel. "When filled, tanks leave about 10 to 15 percent air space for expansion, in case its fluid freezes. Komatsu built the AdBlue®/DEF system so that the lines purge the fluid back into the tank when a machine is shut down, to help prevent the lines from freezing. Our tank is coolant-line heated, so a completely frozen tank will flow in about 40 minutes, which is about half the time the EPA mandates.

"At the other extreme, high temperatures shorten the life of AdBlue®/DEF," he added, "So, we created an automatic bypass valve that turns off the heated coolant line."

Hard workers

A monitor on a Tier 4 Final machine shows the AdBlue®/DEF level and alerts users to inferior-quality fluid. Another new feature on Tier 4 Final equipment allows operators to input an identification number, so equipment managers can track specific users via KOMTRAX®.

"These new components are add-ons to the already-comprehensive list of items customers can track through KOMTRAX® on their computer or mobile devices," said Boebel. "As with our Tier 4 Interim equipment, Komatsu and our distributors monitor these new machines through KOMTRAX®, so certified technicians can perform complimentary scheduled service under the Komatsu CARE program. Tier 4 Final machines have a few added maintenance items, and the program has expanded coverage.

"With each tier level, Komatsu made improvements, and these machines are no exception," Boebel added. "The Interim level gave us a very solid foundation from which to work and build. We took those reliable, productive and efficient improvements and enhanced them. For instance, we reduced the exhaust gas recirculation rate and advanced engine timing to provide more complete fuel burn and lower PM. In one example, we slightly tweaked the Komatsu Variable Geometry Turbocharger, providing even faster ramp-up speed and response.

"Like all our previous models, the new Tier 4 Final machines are made to work hard," he added. "In fact, the harder you work them, the better they perform."

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