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A Brief Word...

Though the weather was excellent for the AORS Trade Show in Sturgeon Falls recently, pity the attendance was light. It did, however, allow for some good conversations amongst attendees, and one to which I was privy concerned "low bid wins".

Is the Walmart model the one which was intended, when the tender process was originally introduced as a replacement for the "Old Boy" network method of contract award? The consensus was no, but that is what we have and it is costing us money as governmental budgets get ever tighter.

A competitive price is a good thing, but without a "Value Assessment", is the cheapest the best? A road construction/paving contract that legitimately won by being the lowest bidder was used as an example. Unfortunately the contractor failed to secure a specialist piece of equipment and could not perform the work as engineered. Fearing penalty and censure, they chose to convince the inspection engineer into accepting a lesser method which undermined the original intention of the design engineering specification.

The result was a job completed, within the ascribed cost. The hidden result is a fault waiting to happen and the design life cycle of the project being compromised.

The conversation concluded that there is a significant difference between Cost and Value, and any purchasing method that can balance these will save money in both the short and long term.

It should encourage all of us to strive to promote Value in everything we do.





On the cover:

compressed air rental equipment from Comairco with dry air cooled and filtration system.

Sullair brand compressors prevent oil contamination by using biodegradable lubricants.

HYUNDAI CONSTRUCTION EQUIPMENT EXPANDS ITS DEALER NETWORK

Hyundai Construction Equipment Americas recently announced the expansion of its North American authorized dealer network with the addition of 4 dealerships, including one in Canada.

With the addition of these new dealerships, Hyundai's North American network now includes 71 dealerships operating in more than 125 locations, offering sales, service, and parts for the full line of Hyundai excavators, wheel loaders, compaction rollers and other construction equipment.

Joining the Hyundai authorized dealer network are EquipmentShare in Columbia, Missouri; RECO Equipment, Inc. in Belmont, Ohio; OSC Manufacturing & Equipment Services, Inc., in Buffalo, New York; and Bobcat of Ottawa, serving Eastern Ontario from its location in Ottawa, Ontario.

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"The addition to our authorized dealer network of established, successful dealerships in the U.S. and Canada continues strengthening our ability to meet the needs of construction equipment customers across North America, and testifies to the value of the Hyundai Construction Equipment brand," said Stan Park, manager, strategic distribution, Hyundai Construction Equipment Americas.

Hyundai sales, service and parts teams deliver regular product and service training to ensure dealer partners are able to provide top-caliber support to meet the growing business needs of Hyundai Construction Equipment customers.

Source: Hyundai Construction Equipment Americas, Inc.

KOBELCO APPOINTS HOPKINS EQUIPMENT AS ONTARIO DEALER

KOBELCO Construction Machinery USA continues to expand representation in the North American market by adding Hopkins Equipment to its growing dealer network. Hopkins Equipment will represent KO-BELCO's full line of excavators in Eastern Ontario.

"Offering topnotch products goes hand in hand with our commitment to providing customers with superior sales, product and parts support," says Aaron Hopkins, president of Hopkins Equipment. "KOBELCO is the only manufacturer we represent because they deliver excavators of the highest quality. KOBELCO machines are well-known for exceptional durability and cutting edge power and efficiency capabilities. We're excited to provide our customers with the value of KOBELCO's industry-leading products."

KOBELCO has long been recognized for its world-class line of excavators. In order to continuously improve its singular product line, KOBELCO's team of engineers and field experts dedicate substantial time and effort into the research and development of today's leading technologies and machinery. KOBELCO ensures the delivery of excavators that can withstand the dayto-day rigors of demanding jobsites, while providing operators with all the production and comfort features required for a profitable day's work.

The staff of Hopkins Equipment will be working closely with KOBELCO to gain the required sales and product support training to deliver on KOBELCO's promise of customer satisfaction. Hopkins Equipment will provide professional sales and service support on all KOBELCO excavators from their location in Gloucester, Ontario.

Hopkins Equipment is a specialized, owner-operated heavy equipment dealership with 20 years of experience serving the construction industry. As a single line dealer, they focus on the sales, rental, maintenance, service and after-sales support of KOBELCO's full line of excavators.

Source: KOBELCO Construction Machinery USA

CALL FOR ENTRIES NOW OPEN FOR 2017 IDEAS² AWARDS

Architectural and engineering firms, structural steel companies, general contractors and owners are encouraged to enter their steel-framed building projects in the 2017 Innovative Design in Engineering and Architecture with Structural Steel (IDEAS²) Awards competition. Conducted annually by the American Institute of Steel Construction (AISC), the awards recognize excellence and innovation in engineering and architecture on structural steel projects across the U.S. In existence for more than half a century, the award is the highest honor bestowed on building projects by the structural steel industry in the U.S. Entries are now being accepted for the competition at www.aisc.org/ideas2. Entrants should note this year's earlier entry deadline of August 26, 2016.

"Each year, the IDEAS² Awards recognize and award all members of the project's team involved with the structural framing system and demonstrate that innovation and creativity can be found on building projects of every size and description," said Roger E. Ferch, P.E., AISC's president. "Steel continues to provide excellent solutions for the entire design and construction team, from architects, engineers and developers to fabricators, erectors and general contractors."

In addition, project entries will receive special recognition on SteelDay (September 30). New to the competition this year is an opportunity for the public to join in the judging of the projects entered in awards program by selecting their favorites at www.aisc.org/ideas2, starting the week of SteelDay. The project that receives the most votes will receive a People's Choice Award in the competition.

The projects selected to receive IDEAS²

Awards will be announced at the 2017 NASCC: The Steel Conference, in San Antonio, Texas, on March 22-25. Awards will be presented by AISC to the submitting firms and their fellow project team members at the individual project sites during the year, and all winning projects will be featured in Modern Steel Construction magazine.

Source: American Institute of Steel Construction

TRELLEBORG'S ACQUISITION OF CGS HOLD-ING FINALIZED

Trelleborg has finalized the acquisition of CGS Holding a.s. – a privately-owned company with leading positions in agricultural, industrial and specialty tires as well as engineered polymer solutions. The total cash consideration amounted to approximately SEK 10.9 billion (\$1.75 billion) on a cash and debt-free basis. CGS is headquartered in the Czech Republic and generated sales of approximately \$889 million in 2015 with an operating margin of 16.5%.

"It is highly gratifying to welcome CGS to the Trelleborg Group. The company has long been on our list of interesting acquisitions. The acquisition means that Trelleborg will almost double its sales in agricultural tires, strengthen its leading position in industrial tires and add new positions in complementary specialty tires segments. CGS's engineered polymer solutions add new interesting positions as well as strengthen Trelleborg's existing leading positions in several of the Group's current business areas," says Peter Nilsson, president and CEO of Trelleborg. CGS Holding includes the businesses Mitas, Rubena and Savatech. Mitas accounts for approximately 2/3 of group sales and has strong mid-market specialty tires brands with a particularly strong position within agricultural tires. The offering of specialty tires is complemented by Rubena's and Savatech's niche engineered polymer solutions businesses, including seals, sealing profiles, specialty molded products, printing blankets and other engineered fabrics.

"We are convinced the agricultural market will recover, enabling us to benefit from an attractive footprint when it does. Accordingly, we consider the purchase consideration to be attractive given the expected synergies and the future recovery of the agricultural market," concludes Mr. Nilsson.

Mitas will be integrated into the Trelleborg Wheel Systems business area. During transition, other operations will be independent from Trelleborg's existing operations before being gradually integrated into current business areas.

Following the acquisition, Trelleborg will have sales of about \$4.8 billion, with about 23,000 employees in 47 countries. Source: Trelleborg AB

JMC STEEL GROUP CHANGES NAME TO ZEKELMAN INDUSTRIES INC.

JMC Steel Group has announced that it is changing its corporate name and identity to Zekelman Industries Inc.

Zekelman Industries is the parent company of Atlas Tube, Wheatland Tube, Sharon Tube, Picoma and Energex Tube.

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Each of these business units will continue to operate under its existing brand name.

"The change of name and identity signifies my, and my family's, commitment to our business, customers, team members and suppliers. I am proud of the work we do and honored to have my name associated with the products and services we provide," said Barry Zekelman, CEO of Zekelman Industries.

Zekelman Industries is a leading value-added metal processor. Its focus is on providing superior customer service through the timely delivery of highquality, high-value industrial products. The company is committed to the continuous improvement of its best-in-class customer service and manufacturing processes. To this end, Zekelman Industries is constantly investing in its systems and facilities. Most recently, the company completed its "Phoenix" project at the Wheatland Division's Council Avenue facility. This investment has improved product delivery, quality and throughput. Additionally, Zekelman Industries' recent investment in VectorBloc (a modular construction design system) is a step toward expanding the company's product lines and manufacturing capabilities.

"Zekelman Industries will continue to stay focused on innovation and excellence as we move forward," said Mr. Zekelman. "The future is very bright for Zekelman Industries!"

Source: Zekelman Industries

Hitachi ZX135US-6 and ZX245USLC-6 Ultrashort Excavators Offer Big Efficiency in Tight Spaces

Hitachi Construction Machinery - America's Dash-6 lineup continues to grow with the introduction of 2 new ultrashort excavators – the ZX135US-6 and ZX245USLC-6 – in Canada and the U.S.

The updated, reduced-tailswing models are equipped with a powerful EPA Final Tier 4 (FT4)/ EU Stage IV Isuzu engine complete with integrated, effective engine technologies and do not require a diesel particulate filter.

"With a tight tail-swing radius, the ZX135US-6 and ZX245USLC-6 are perfect for contractors working in and around obstacles," said Mark Wall, Excavator Product marketing manager for



Hitachi Construction Machinery - Americas. "In addition to the emissions update, we used this upgrade as an opportunity to add a few features our customers have been asking for like a standard rearview camera, standard factory installed auxiliary hydraulics with programmable attachment modes, and upperstructure handrails."

An optional backfill blade for the ZX135US-6 adds stability and versatility, eliminating the need for another machine on the job. The ZX135US-6 also comes with an optional rubber pad that helps reduce damage when working on concrete or asphalt, and when crossing streets in residential developments.

Built with the same toughness as Hitachi's large mining excavators, the ZX135US-6 and ZX245USLC-6 deliver higher efficiency, reliability and durability.

Source: Hitachi Construction Machinery Co, Ltd

SCREEN MACHINE INDUSTRIES CEL-EBRATES 50 YEARS OF INNOVATION

Screen Machine Industries celebrated its golden anniversary with a huge celebration on June 23. According to president Steve Cohen, the occasion offers a moment to reflect on the previous 50 years of success, while also focusing on exciting new opportunities ahead.

"We are proud of the legacy we have built since my dad, Bernard Cohen, started this company in 1966," said Mr. Cohen. "The difference has always been in the details. It's about making our products more durable than they need to be, so they are the most reliable on the market. It's about being innovative in design, as our numerous patents clearly illustrate."

"This is a tough business. Our machines can literally crush and size anything that comes out of the earth. That requires dependability and ingenuity. We are seeing a huge demand for our products all around the world, and we are poised to serve that need in a big way as we begin our next half century," adds Steve Cohen.

Screen Machine products already can be found all around the globe. From Afghanistan to South Africa to the Far East and throughout North and South America, Screen Machine equipment is getting the job done. The product line includes 3 types of crushers, a variety of screening plants, and a selection of trommels and conveyors. Collectively, they can *Crush Any Job*[™].

Rugged. Reliable. Innovative. That's what it takes to be the leader in the crushing and screening industry. It is exactly what Screen Machine Industries has been doing for 50 years.

Source: Screen Machine Industries

NOVIK ACQUIRES EXTERIA BUILDING PRODUCTS, AS INDUSTRY LEADERS JOIN FORCES

Novik[®], a premier manufacturer of shake, stone and accessory products that replicate the natural beauty and texture of wood and stone, acquired Exteria Building Products of Miami, Florida, effective June 2, 2016. Clearview Capital Fund III, LP, principals of Novik since 2014, completed the purchase from an affiliate of Graham Partners, owner of Exteria Building Products and





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its co-investors. Clearview Capital[®] is well known in the building products industry for having created and built the AZEK[®] brand of cellular PVC trim, deck and railing products.

Novik is best known for its NovikShake[™] and NovikStone[™] brands. Led by innovation, Novik's world class surface treatment features StainNatural[™], a proprietary semi-transparent wood stained cladding. "We are thrilled to be partnering with the excellent team and product lines of Exteria Building Products," said Ralph Bruno, president, Novik. "The power of bringing together these 2 industry leaders will give us the size, scale and breadth of products to accelerate growth and demand throughout our existing channels."

According to Mr. Bruno, it will be business as usual moving forward, as Novik will be keeping both manufacturing facilities, both brands and both sales teams. "The entire Novik team looks forward to working with Frank McCormack, senior vice president of sales for Exteria and his team to serve our combined customer base," he said. François Giroux will continue as CEO of the new combined entity.

Exteria is best known for its "weathered series" and color match shake offerings as well as its cutting edge masonry line. "These are exciting times for our employees, our customers and our ever-increasing network of builders and contractors as we join with Novik to take our business to the next level," said Frank McCormack. Source: Novik

TOPCON ANNOUNCES GLOBAL AGRICUL-TURE GROUP

Topcon Positioning Group announces the formation of the Topcon Agriculture Group, a new global organization that further incorporates its precision agriculture business with recently acquired companies to create new connected field and farm management solutions for aftermarket and OEM customers. The global headquarters of the new group is Turin, Italy, with regional North American headquarters

ANSI Approves ALI Standard Covering Lift Installation and Service

The American National Standards Institute (ANSI) has approved the latest version of the American National Standard covering safety requirements for vehicle lift installation and service. The new standard, ANSI/ALI ALIS 2009 (R2015), replaces the existing standard, ANSI/ALI ALIS 2009, effective June 15, 2016.

ANSI/ALI ALIS 2009 (R2015) describes the duties and responsibilities of lift installers and service technicians, includ-



ing the required qualifications, training, reporting and documentation. It also provides sample forms and checklists for use by installers and service personnel attempting to comply with the standard.

There are no substantive changes in the revised standard contents. It is distinguished from previous versions by a new full-color cover in place of the traditional pale yellow cover.

Copies of ANSI/ALI ALIS 2009 (R2015) are available from the Automotive Lift Institute (ALI) and its member companies. Visit the ALI Store at www.autolift.org/ali-store/ to learn more about this and other ANSI lift safety standards, as well as other materials offered in support of ALI's mission of promoting the safe design, construction, installation, service, inspection and use of vehicle lifts.

Source: Automotive Lift Institute (ALI)

in Fort Atkinson, Wisconsin, and regional APAC headquarters in Adelaide, Australia.

"With our recent acquisitions of Wachendorff Elektronik, Digi-Star, RDS Technology and NORAC we now have the most extensive offering of field and farm management solutions in our industry," said Ray O'Connor, president and CEO of Topcon Positioning Group (TPG). "We will continue a strong focus on traditional field applications, but we now also have the sensors and software to provide comprehensive planning, process control, workflow monitoring and extensive reporting that will bring our customers the full advantages of connected farming with immediate positive effect on their productivity."

The new global headquarters in Italy is also a result of this added emphasis on connected farming. "Our telematics division - Tierra Telematics Design - has been located in Turin since 2008 and has had great success in both the construction and agricultural markets, particularly with important OEM clients," said Ivan Di Federico, TPG chief strategy officer and now also chairman of Topcon Agriculture. "It is our objective to bring IoT (Internet of Things) solutions into the agriculture business that will link all the mechanics of farming to provide a workflow automation framework necessary to achieve sustainable and profitable agriculture."

Fabio Isaia, the former Tierra CEO will now become CEO of Topcon Agriculture. "The new ag paradigm is moving towards the integration of different technologies to collect data from heterogeneous sources, which is exactly where we see our business going," said Mr. Isaia. "Similar to other sectors, our mission will be to mine 'big data' to find information that will help customers to 'harvest' knowledge and make educated decisions to improve their workflows and business, with valuable ROI. Furthermore, we are planning to create an eco-system that will allow our customers and their partners to integrate seamlessly any data source and data model."

Wachendorff Elektronik, a recognized global leader in the design and manufacturing of in-cab display for off-highway equipment located in Geisenheim, Germany, will expand its capabilities and





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After purchasing the Sonic SideGrip[®], Heneault Gosselin was able to tap into a new market exposing them to new opportunities and jobs than they had done in the past. While specializing in rebuilding existing foundation, Heneault Gosselin has now been installing piles for new construction in Eastern Canada. The Sonic SideGrip[®] has provided the ability to build on ground never considered before. Before, Heneault Gosselin was using a hydraulic hammer could do 4-5 piles in the amount of time that they now can do 20-25 piles using the Sonic SideGrip[®]. Peter Tobin, at Heneault Gosselin, has expressed how the Sonic SideGrip[®] has not only provided efficiencies in job performance but also an opening in a new market resulting in new opportunities to win bids and complete jobs that they could not have before.



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become the primary manufacturing location for the entire Agriculture Group.

Albert Zahalka, who has been president of Topcon Precision Agriculture since 2010 and is now also COO of Topcon Agriculture, said, "Digi-Star has been a great addition to our company, and now as regional headquarters, will continue to supply its leading weighing, feed and farm management solutions, along with centralized sales and support for our distributors and OEM partners. We are very excited to have our North American regional headquarters located in its agricultural heartland.

"NORAC Systems, with its best-in-class boom height control systems," Mr. Zahalka said, "and the intelligent measurement systems produced by RDS Technology will

John Deere Unveils JDLink[™] Dashboard for Customers to Better Understand and Manage Equipment

John Deere is launching a new telematics interface enabling customers to better optimize their machines, uptime and jobsites. The JDLink Dashboard provides intuitive, easy-to-use tools for contractors to manage their equipment that have active JDLink

Ultimate, Express, or Locate subscriptions.

"The JDLink Dashboard provides customers the ability to improve machine uptime, make machine data easier to assess and understand and allow users to do more with their fleet information," said Paul Garcia, product manager, John Deere WorkSight[™]. "This new web application will streamline



equipment maintenance management and documentation of owning and operating costs, leading to increased profits and improved productivity for our customers."

Utilizing the JDLink Dashboard, John Deere customers will see the most important metrics up front, in a visually compelling manner. These metrics include red alerts, machines with zero hours, machines with the highest idle, and machines that are being over or underutilized.

One of the most exciting features of the JDLink Dashboard is a new equipment maintenance management tool named Maintenance Manager. It lets users quickly and easily set up factory or custom plans using either engine-hour or calendar-based service intervals. Maintenance Manager makes tracking maintenance significantly more convenient for equipment managers.

Customers can access the JDLink Dashboard using web browsers, tablets and smart phones. With an overall goal of increased productivity and efficiency, the JDLink Dashboard will continue to evolve. More specific machine data found today in the existing JDLink interface will be added in future updates along with new and improved tools that deliver on customer needs.

The debut of the JDLink Dashboard also introduces construction professionals to the MyJohnDeere web portal. On one web page with one set of login credentials, the My-JohnDeere web portal provides customers access to multiple John Deere applications in addition to the JDLink Dashboard, such as JDParts, TimberNavi and John Deere Financial. Source: Deere & Company

continue to mainly provide core technologies and solutions to the global OEM markets."

Mr. Isaia said, "Together with Wachendorff, Digi-Star, NORAC and RDS, we can count on a vast and comprehensive products portfolio that will become smartly connected to the new Topcon Agriculture eco-system, to source information that's the core of all augmented agricultural services we'll offer to our customers."

Mr. O'Connor said, "This new business model greatly broadens the scope of our investment in the global agricultural markets. It will re-center our operational structure to make a strong push into the growing European aftermarket and OEM business, while further developing our investment in the agricultural heartland of North America. It will create new efficiencies in R&D, engineering and manufacturing, while streamlining our abilities to continue to grow our other core businesse."

Source: Topcon Positioning Group

REXROTH EXPANDS ITS OPERATIONS IN BRITISH COLUMBIA

Bosch Rexroth Canada moved its British Columbia location from Burnaby to a brand new facility in Port Coquitlam. The dedicated team of highly experienced fluid power and factory automation professionals together with a new updated facility in Port Coquitlam is a clear demonstration of Bosch Rexroth's commitment and support for the local market.

The new facility features a state of the art 600 m² shop/warehouse with improved Hydraulic Repair Shop facilities and better Warehouse capabilities, including an improved process flow based on the principles of 5S.

An open house was held for customers on May 26th which included a tour, product demonstrations, meet and greet with the president, ribbon-cutting ceremony and BBQ lunch.

Source: Bosch Rexroth Canada



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ABB Technology Helps to Make History in the Swiss Alps

As Switzerland officially opens the world's longest railway tunnel, the 57 km Gotthard Base Tunnel through the Alps, ABB has inaugurated special pavilions at Rynächt at the tunnel's north portal and at the tunnel's south portal at Pollegio to highlight ABB's contribution to what is being described as the "project of the century". Among those present at the ribbon-cutting ceremony were ABB chairman Peter Voser and CEO Ulrich Spiesshofer.

ABB supplied the major electrical components for the entire 50-Hz power supply of the tunnel infrastructure, as well as the power supply and control systems for the ventilation system, which at 15.6 MW is the most powerful in the world.

The pavilions also the showcase ABB's contribution to Switzerland's rail tunnel infrastructure over more than a century as well as the company's long association with the Swiss Federal Railways (SBB). ABB's Swiss predecessor company, BBC,



electrified the original Gotthard rail tunnel, completed in 1882, as well as the Simplon and Lötschberg tunnels at the start of the 20th century.

Following the pavilion inauguration, the ABB delegation, which also included Bernhard Jucker, president of ABB's Europe region, and Remo Lütolf, managing director of ABB Switzerland, was attending the official opening ceremony of the Gotthard base tunnel, along with the leaders of Switzerland's neighboring countries and Swiss government officials.

On June 4 and 5, the ABB pavilions were open to the general public as part of a special program of events to celebrate the opening of the tunnel, which is a critical artery in Europe's growing rail transport network.

Source: ABB



25th National Student Steel Bridge Competition

A team of civil engineering students from École de technologie supérieure (ETS), Montreal, Quebec, are the overall winners of the 2016 ASCE/AISC National Student Steel Bridge Competition (NSSBC), hosted by Brigham Young University in Provo, Utah, May 27-28. For the second straight year, second place went to California Polytechnic State University, San Luis Obispo. The University of Florida, last year's champions in the competition, took home third. Forty-eight university and college teams qualified to compete in the 25th annual national championship, narrowed down from a total of 223 teams that participated in 18 regional competitions throughout the spring.

"I'm very proud of our team," said Alan Carter, Ph.D., professor and ASCE faculty advisor at ETS. "They did an incredible job and the national title gives them the ultimate reward. Not only is it our first national title, but it's the first national title for a Canadian team, which makes us even happier."

Throughout the academic year, student

teams devote countless hours perfecting the design, fabrication and construction of their own scale-model (1:10) steel bridge under a set of rules that reflect real-life structural specifications and construction regulations. To achieve success in the competition, students must be able to apply engineering concepts and effectively work together to assemble their bridge under the pressure of the clock.

"It was an amazing experience for all of our team," added Jean-Philippe Boucher, a third-year student and captain of the 15-member steel bridge team at ETS. "Last year we ended up third and we came back with one goal – to finish first this year. We knew before the competition which teams were in good position for the win and we knew it would be tight, so we had to perform great on competition day. When our team was announced first place in the competition, it was an unbelievable feeling. We're really proud of all the work we've done this year."

Bridge rankings were based on the categories of construction speed, stiffness,

lightness, economy, display and efficiency. The teams with the best combined rankings across all categories earned overall award recognition.

"The quality and character of the students' work is impressive," said Nancy Gavlin, AISC's director of education. "The competition poses real-world challenges that the students face with ingenuity and professionalism."

This year marked a quarter-century of the NSSBC, which has evolved from a small academic competition in Michigan to a national showcase of skill and teamwork that preps students for real-world bridge design. Watch AISC's video commemorating 25 years of the competition.

The complete NSSBC rankings are available at www.nssbc.info.

Next year's national competition will be held May 26-27 at Oregon State University in Corvallis, Oregon.

Source: American Institute of Steel Construction

Bauer Expertise for the Longest and Deepest Railway Tunnel in the World

Switzerland is becoming smaller... On June 1st, the Gotthard Base Tunnel was ceremonially opened in the presence of



A BAUER BG 40 rotary drilling rig was used. © BAUER Group

state guests from across Europe. Over 1,100 guests took part in the official maiden journey through the tunnel, which is 57 km long and runs up to 2,300 m

from 5 different starting points simultane-

ously. The northernmost starting point

is in Erstfeld, from this point the tunnel

below the Alps. It is the longest and deepest railway tunnel in the world. The Swiss subsidiary of BAUER Spezialtiefbau GmbH and BAUER Umwelt GmbH were also involved in the construction project of the century.

The twin-tube Gotthard Base Tunnel links Erstfeld and Bodio. Construction work started in 1999: the tunnel was excavated was extended towards the south. In 2005, **BAUER** Spezialtiefbau Schweiz AG carried out the specialist foundation engineering works here for the ARGE VGE Lot 1. The main works consisted of bored piles with diameters of 1,200 and 1,500 mm, which were drilled to 33.5 m under extremely difficult conditions - in boulder-like landslide material. A BAUER BG 40 rotary drilling rig was used for this. BAUER Spezialtiefbau Schweiz AG installed permanent anchors up to 70 m long in the pile wall. For this, bore holes were drilled

through the boulder-like unconsolidated rock through to the solid rock. As a first step, the excavation pit served as a starting pit for the tunnel boring machine. After completion of the drilling works, the tunnel was constructed in this area using the open-cut tunnelling method, then the excavation pit was refilled.

From January 2011 to August 2013, BAUER Spezialtiefbau Schweiz AG also



constructed foundation piles for a 1,060 m long viaduct between Lugano and Bellinzona. For the static basis of the structural design, test piles were constructed



In 2005, BAUER Spezialtiefbau Schweiz AG carried out the specialist foundation engineering works in Erstfeld for the ARGE VGE Lot 1. © BAUER Group

beforehand and static pile load tests were carried out. A total of 313 cast-in-place concrete piles with a diameter of 1,200 mm and lengths of up to 29 m were drilled and concreted.

BAUER Umwelt GmbH was also involved in the construction of the tunnel. The company was commissioned – partly as a joint venture – with the construction and operation of 2 water treatment plants: the first in Amsteg, where the resulting mountain water had to be treated before its introduction into the river; and the second in Faido, where Bauer installed a nitrite treatment plant due to the high nitrite concentration resulting from the explosives used in the tunnel driving.

The breakthrough in the east tunnel took place on October 15, 2010, and in the west tunnel on March 23, 2011. Test operation began in October 2015. At the start of June, this year, AlpTransit Gotthard AG handed over the operation of the tunnel to Swiss Federal Railway (SBB). After further testing, the tunnel will be put into operation as the heart of the new AlpTransit on schedule on December 11, 2016. Traveling by train on the north-south line will soon be much more attractive for people as well as goods from the whole of Europe.

Source: BAUER Group

Centralized Fleet Fluid Maintenance Systems

FLO Components Ltd. announces its new partnership with RPM Industries LLC to sell and install their complete product line of centralized fleet fluid maintenance systems. With the RPM Industries product line, FLO Components Ltd. has a complete range of engine pre-lubrication and fluid evacuation technologies that automate routine maintenance of heavy equipment to save owners and dealers time and money.

"Routine maintenance has become anything but routine", said Mike Deckert, vice president of FLO Components. "Keeping your fleet in peak operating condition can be difficult and time consuming. Machines sit idle for hours during 'simple'

oil changes. Technicians risk injury removing hot oil filters and climbing under or around the machines. There is also the problem of oil spills causing environmental contamination. The QuickFit[™] system offers a simple solution for all of that."

The heart of the new product line is the QuickFit[™] system, according to FLO's marketing specialist, Gabriel Lopez. "In spite of

all the technological advancements over the years, people are still doing oil changes on their equipment the way they did back in the 1950s. RPM Industries' patented QuickFit[™] system is

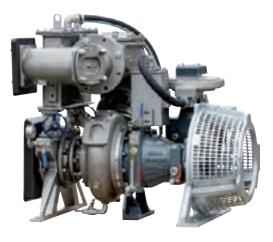


a simple and effective way to change oil, transmission and hydraulic fluids from a single, ground-level connection, without taking too much time, risking unnecessary

BA Pumps Now Available in Corrosion-Resistant Stainless Steel

The most popular pumps from the dry self-priming BA series are now also available in stainless steel 316. These pumps are ideal for a variety of industrial applications, particularly with corrosive environments such as offshore or mining which demand high performance materials.

The stainless steel casting parts are typically available from stock for the most popular BA models. This allows the stainless steel pumps to be



quickly assembled with a diesel or electric motor in a sound attenuated canopy or in an open frame.

The stainless steel 316 range consists of clear liquid (200 m³/hour – 110 mwc) pump and solids handling (190-720 m³/hour – 22-41 mwc) pumps.

Source: BBA Pumps BV

injury or environmental fines. The Quick-Fit[™] system incorporates the PERT[™] process to: purge the filters with compressed air so that old filters can be removed and clean filters can be installed cleanly and safely with no spills or burns; evacuate the sump directly to the final waste container; refill the engine via its new filters and timestamp the service to automatically document the maintenance event."

"At FLO Components, we provide turnkey solutions to take away our customers' pain. The RPM Industries line of centralized fleet fluid maintenance systems further enhances FLO Components' ability to help customers protect their equipment and employees while improving productivity," added Mr. Deckert. "With just one fitting per compartment, the QuickFit[™] system allows you to service most machines in less than 30 minutes. It makes fluid maintenance cleaner, safer and faster for all makes and models. Because the process is repeatable, it's easier for you to schedule and plan routine PM services. Maintenance becomes easier, your productivity goes up and the risk of spills and contamination is virtually eliminated."

Incorporated in 1985, RPM Industries LLC manufactures a broad range of engine pre-lubrication and fluid evacuation technologies for industries utilizing diesel or gas engines. RPM Industries offers OEM and aftermarket systems for heavy-duty diesel applications in a wide variety of industries, including construction, mining, waste management, over the road trucking, coach and bus transportation, as well as marine, aggregate and powergeneration applications.

Source: FLO Components Ltd.

World Premiere of the New Hatz 3-cylinder Diesel Engines

The first Hatz 3-cylinder models will go into series production in 2018. They will expand the H-series with powerful, efficient and compact engines. Hatz presented the new engine family at bauma 2016, held last April in Munich, Germany.

The concept of the new 3-cylinders aims to be an ideal solution for today's compact machine class up to 50 hp. The goal is not only to house engines in a compact installation space, but the form and operation of the machines must also remain unchanged. If exhaust emission aftertreatment becomes necessary, the little brother of the 4-cylinder engine profits in particular from the compactness and the low raw emissions of the H-family.

The industry has been successfully practicing the downsizing concept for years. As such, the 1.5 I Hatz 3H50 will replace engines with displacements over 2.5 I. The torque and response behavior are considerably superior to the present generation. At the same time the fuel consumption

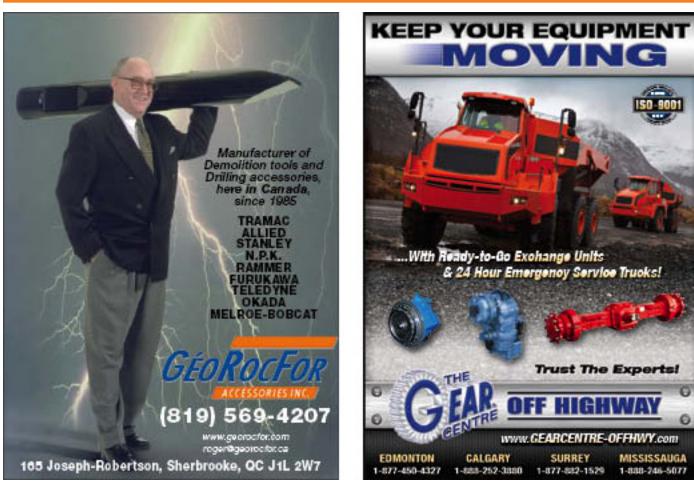


values are significantly reduced. This could be achieved, amongst other factors, thanks to its sophisticated combustion chamber geometry, Bosch injection technology, minimized friction and a charge air pressure of 1.7 bar ensure the right dimension of power in less than a 0.2 m³.

Following the family concepts, the various 3H50 models are also orientated on the currently valid and future emission standards.

oped for the U.S. market and Canada as well as some Asian countries. In order to ensure compliance with the emission standards US EPA Tier 4 final and EU Stage IIIB, the proven combination of an external gas recirculation (EGR) and a diesel oxidation catalyst (DOC) reduces substances potentially harmful to the environment to the required level – without the need of a diesel particulate filter (DPF).

Source: Motorenfabrik Hatz



The Hatz 3H50TIC was primarily devel-

CASE CE Announces Availability Tutela Powershift HD Transmission Fluid Through Dealer Network

CASE Construction Equipment announced that Tutela Powershift HD all-makes powershift transmission fluid is now available through its dealer network to allow CASE dealers to better service mixed fleet customers. Tutela Powershift HD is recommended for use in heavy-duty powershift transmissions and final drives of today's construction and mining equipment. It is designed for all makes of equipment, which makes CASE

dealers one-stop shops for service and maintenance needs for non-CASE branded

 equipment.

The oil is engineered to deliver balanced friction performance to transmissions, clutches and wet-brakes, while protecting axles, final drives and other drivetrain components. Tutela Powershift

HD's benefits include:

• Balancing friction properties to control transmission slippage, extend clutch life and minimize chatter in wet brakes.

• Providing anti-wear performance to protect gears and hydraulic pump components

under heavy loads and pressures.Excellent oxidation resistance, sludge

control and corrosion protection in extreme conditions.

The transmission fluid is available in 2 viscosity grades – SAE 10 and SAE 30 – in both 19 I and 208 I sizes to meet various operating needs. Tutela Powershift HD can also be used in hydrostatic and hydraulic systems of construction and mining equipment, where other fluids may be required.

CASE Construction Equipment sells and supports a full line of construction equipment around the world, including the No.1 backhoe loaders, excavators, motor graders, wheel loaders, vibratory compaction rollers, crawler dozers, skid steers, compact track loaders and rough-terrain forklifts. Through CASE dealers, customers have access to a true professional partner with world-class equipment and aftermarket support, industry-leading warranties and flexible financing.

Source: CASE Construction Equipment

DEUTZ Corporation and Gwinnett Tech Partner to Produce Tomorrow's Diesel Technicians

DEUTZ Corporation and Gwinnett Technical College of Lawrenceville, Georgia, are helping students in the College's Heavy Diesel Service Technician program prepare for their future careers. As part of the new DEUTZ Technical Education Partnership, DEUTZ Corporation has donated 7 diesel engines to the program, giving students hands-on experience with modern technology.

"Our industry is suffering from a lack of well-trained technicians," said Robert Mann, DEUTZ Corporation president and CEO. "Off-highway diesel engine emission regulations have become increasingly stringent, necessitating the use of electrical controls and exhaust after-treatment systems. As a result, diesel engine technicians need additional in-depth training."

Gwinnett Tech's Heavy Diesel Service Technician Program educates students on both theory and diagnosis of the basic diesel engine systems found in heavy equipment, safety and fuel systems.

"The Heavy Diesel Service Technician

Program is at the core of our Automotive Service Technology and Automotive Technology programs," said Dr. D. Glen Cannon, president of Gwinnett Technical College. "This particular program attracts students who want to pursue careers in the diesel repair industry to Gwinnett Tech, and with our in-depth instruction and new equipment, we expect its popularity to grow. It is such a crucial program to our school, and it is an honor to partner with DEUTZ Corporation, a training and equipment leader in the diesel engine industry."

By donating engines and training, DEUTZ Corporation hopes to help increase the number of trained diesel technicians available within the heavy equipment industry. Students beginning the Heavy Diesel Service Technician program in August 2016 will have a full academic year to complete and obtain their certificates from Gwinnett Technical College. The program's length allows students to submerge themselves in their training and develop extensive knowledge. Approximately 40 students will be under the tutelage of Johnny Stalling, a Gwinnett Tech instructor with an extensive diesel engine background. To further assist program students, Mr. Stalling will periodically return to DEUTZ Corporation for additional training. DEUTZ Corporation wants this partnership to be a lasting one, and keeping the program's instructor supplied with the latest information will certainly help.

"The program itself is tied together with an internship at a local diesel equipment repair facility," said Gail Edwards, dean of automotive and trades at Gwinnett Tech. "Because we're able to offer this type of practical education, we've been able place 100% of our program's graduates."

"Tier 4 diesel engine technology can be quite complex," said John Stahl, warranty and training manager for DEUTZ Corporation. "That's why DEUTZ is also providing the school with our original factory electronic part catalog and scan tools, so students will be familiar with OEM resources available in the field."

Camso Introduces New Line of Sprockets for Compact Track Loaders

Camso is now offering its own line of sprockets for compact track loaders

(CTLs) to help fleet managers improve their maintenance practices and extend track life.

Camso-branded CTL sprockets feature OEM-grade hardening, precision and quality inspections. These sprockets come in a range of 6 sizes for the most popular models of all top track loader brands and are warranted

for 1,100 hours. Competitively priced, they are readily available from Camso dealers across North America.

As a leading supplier of OEM and after-

market tracks, Camso has determined that worn sprockets are the major cause of pre-

mature track failure. A sprocket, however, can be replaced for a fraction of the cost of a new track.

"By introducing Camso-quality sprockets, we are helping our customers cut down on their track maintenance and replacements costs," says Mike Dembe, Market Development manager for Camso North America. "Proper

track and sprocket care will more than pay you back in longer track life and reduced downtime at the jobsite."

Changing sprockets is a very simple

procedure. Fleet owners who change their own tracks, already have all the skills and tools necessary to change sprockets. Mr. Dembe recommends inspecting the sprockets every time a track is changed. He says that the teeth of the sprocket should be the focus of the inspection.

"Check the teeth for the appearance of a 'shark-fin' profile – the thinning and sharpening of the tooth – at the wear tips. This thinning of the metal, along with any broken teeth, will degrade the fit and will result in excessive wear and tear on the track itself. The shark-fin look tells you it's time to replace the sprocket," says Mike Dembe.

Source: Camso

DEUTZ Corporation plans to monitor the progress of a few students in the program to see how the new equipment and training have prepared them for their careers. Should the DEUTZ Technical Education Program with Gwinnett Tech prove successful, DEUTZ will roll the program out to other technical schools across the country.

"By putting DEUTZ products and training in the school, we hope to provide service managers with DEUTZ-powered equipment with more experienced, savvy technicians, should the need arise," said Mr. Stahl.

"It is a pleasure to partner with a progressive school, especially one that has such a top-quality diesel program," said Mr. Mann. "By working with Gwinnett Tech, we hope to ensure that diesel technicians receive the correct balance of mechanical and electronic training to establish long, productive and fulfilling careers."

Gwinnett Technical College, one of Georgia's largest technical colleges, offers



From I. to r.: Mike Price, general manager, Nidec Elesys Americas Corporation and Gwinnett Tech Foundation chair; Robert Mann, president and CEO, DEUTZ Corporation; Dr. D. Glenn Cannon, president of Gwinnett Technical College; Matthew Holtkamp, owner of Holtkamp Heating and Air and member of the Gwinnett Tech Foundation Board of Trustees; Gail Edwards, dean of automotive and trades at Gwinnett Technical College

more than 150 associate degree, diploma and certificate programs and hundreds of seminars, workshops and courses providing specialized training. Source: DEUTZ Corporation

Larson Introduces a New Forklift Safety Device

The LEDWL-FKLT-BLUE Forklift Warning Spotlight is designed to warn pedestrians and bystanders when in the path of an oncoming forklift. This ultra compact LED light produces a 2,250 lumen output with low amp draw, 50,000 hour service life, and 9 to 60 V compatibility providing operators with a versatile and powerful forklift warning safety light.

The LEDWL-FKLT-BLUE Blue LED Forklift Safety Light from Larson Electronics produces 2250 lumen of sharp blue light while drawing 2.09 A from a 12 V electrical system. Five 5 W blue LED producing 450 lumens each are combined with high output parabolic reflector to produce a narrow 5° spread spot beam, providing a high intensity center beam which is visible during daytime and nighttime operations. This particular unit is ultra compact at only 6" tall by 3.91" wide by 3.36" deep, which makes it ideal for applications where electrical power and mounting space is at a premium. Standard forklift warning systems consist of strobe lights or audible



alarms. Strobe lights may not always be visible with high illumination settings. The strobe lights on forklifts, depending on the position of the light, can be a hindrance to the forklift operator by reducing the visibility due to continual contrasting from the strobe light. Audible alarms, such as backup alarms, are the most disliked warning system for forklifts, especially operators and pedestrians within work forces that have to listen to this alarm continually throughout the work day. Both strobe lights and audible alarms are often ignored due to conditioning of the warning system from day to day exposure. The LEDWL-FKLT-BLUE addresses both the

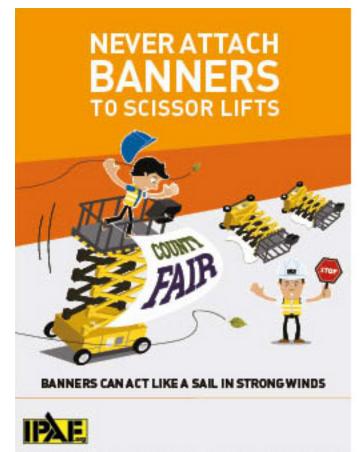


above issues, providing a new system that is not obnoxious and will not get on the nerves of employees, while providing the warning indication required by OSHA to keep employees and pedestrians within the work force safe.

The LEDWL-FKLT can operate in temperatures of -40°C to 80°C, are waterproof to 1 m and resist ingress of dust, dirt and humidity. The housings are formed from extruded aluminum and the lenses are unbreakable polycarbonate. The LEDs offer inherent LED resistance to shocks and vibrations contributing to these units 15.6 Grms rating of vibration tolerance.

Source: Larson Electronics





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Construction and Mining Wising Up to the Need for Fire Suppression – Successful Bauma debut for Firetrace

By Scott Starr, marketing director for Firetrace International

I, along with an incredible 580,000 other people, attended bauma 2016 in Munich this month.

This was the first time either I or Firetrace had attended the show, and even with all that we knew of bauma, the reality was still overwhelming.

We signed up because, as the world's largest show of construction and mining machinery, we considered it an ideal platform for the Firetrace team to present our innovative and highly effective fire suppression systems to this wide-ranging sector, expanding on the success that we have had around the world at individual sites.

Klaus Dittrich, chairman & CEO of event organizer Messe München, says that visitors to bauma always come looking to invest, and that many exhibitors are talking about record levels of demand at this year's show.

From our discussions with equipment owners, manufacturers and dealers during the event, it is clear interest in protecting equipment from fire is on the rise. This was reflected in the number of representatives from across the construction and mining sectors, who came to our stand knowing that we could offer them something they need.

It really is no surprise, though, when you look at the value of a lot of the equipment on display.

Machines like the show-stopping Komatsu PC 7000, the 677 t mining shovel "monster" unveiled at bauma, are worth millions of dollars. The cost of repair – or worse yet replacement – along with the value of lost time, is staggering. And when you consider the scale of the operations the equipment is used in, the cost to businesses of the downtime and disruption can be the more compelling of the figures.

This type of machinery, while functionally very reliable, is susceptible to elements of the working environment. With the risk of lost production costing thousands of dollars a day, the construction and mining sectors are waking up to the fact that they need a fully automatic system, that is low maintenance and easily serviced.

So it makes perfect sense that operations are thinking ahead, being prepared, and talking to us about how Firetrace International can help protect these extremely high value assets.

This was a successful first visit to bauma for us. We had some good conversations, have some strong leads, and we learned that there is a place for us there. We will be back!

Source: Firetrace International



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Scania Trucks Use 2nd Generation Ethanol Manufactured with Clariant's sunliquid[®] Technology

Clariant and Scania are celebrating the results and the opportunities generated by the partnership established last year, which involved an investment in sustainable technologies for cargo transportation.

In mid-2015, Clariant acquired 3 Scania P 270 model 4x2 trucks, which run on ethanol and are the first of their kind to be sold by Scania in Latin America. The Ecotrucks, as they are called, transport ISO tanks with a 25,000 I capacity for chemical products to the fleet of highway trucks, which approach to sustainability, including verifying the positive results of the solutions we provide to the biofuel market, especially the innovative sunliquid technology," states Paulo Itapura, head of Sustainability & Regulatory Affairs for Clariant Latin America.

PERFORMANCE TESTS VERIFY THE PERFOR-MANCE OF THE SUNLIQUID TECHNOLOGY

Sunliquid technology represents an innovative biotechnological process used for

then deliver the products to Clariant's customers. The 3 Scania P 270 tractor units work 24/7 in 4 shifts. They are used to transport chemical products at Clariant's plant in Suzano, in the state of São Paulo, which is the company's

largest industrial complex in Latin America. After nearly a year of using the Ecotrucks, Clariant can verify a reduction in CO₂ emissions by approximately 90% compared to the diesel engines that were used before.

The ethanol fuel used by the Scania trucks contains the Master Batch ED 95 additive produced by Clariant Brasil. The fact that it is produced locally was essential to the viability of the project as this optimizes costs and logistics. The additive allows engines designed to run on diesel to run on hydrous ethanol because it adjusts the characteristics of the fuel to the engines' requirements in order to make the vehicle run well.

As the second phase of this project, Clariant started using second-generation ethanol as part of the fuel to operate the Ecotrucks. This ethanol is manufactured from sugar cane bagasse using the innovative sunliquid[®] technology. "Add value with sustainability is one of Clariant's strategic pillars. The company's initiative with the Ecotruck project supports its environmental goals and reinforces our the manufacture of cellulosic ethanol from agricultural waste such as wheat straw, corncob residue or sugar cane bagasse. Clariant offers the international fuel industry an integrated technology solution, from the pre-treatment of the biomass to the final cellulosic ethanol product. During the process, the pre-treatment without chemicals is highly efficient. Clariant developed enzymes that are highly specific to the raw material in order to break down cellulose and hemicellulose into fermentable sugars based on a stable process and a high yield. The enzyme production within the process increases flexibility and significantly reduces production costs. In the next stage, a fermenting agent allows the C₅ and C₆ sugars to be converted into ethanol, thus increasing the production of the fuel by around 50%.

Since July 2012, the company has been operating a pre-commercial plant in Straubing, Germany, producing up to 900 t of cellulosic ethanol from approximately 4,000 t of raw material. At that unit, over 40 containers of sugar cane bagasse from Brazil were processed to manufacture some of the fuel that is already being used in the Ecotrucks at the Suzano plant. "Today in Brazil, we are demonstrating the commercial use of the cellulosic ethanol fuel, using one of the least CO₂-producing vehicles available: the Scania trucks," comments Martin Mitchell, Business Development manager for the Americas. "We conducted several tests to validate the technical and economic viability of the sunliquid technology, which is already commercially available in Brazil. We verified, once again, that producing the enzymes at the plant itself, in a manner integrated with the overall process and specific to sugar cane bagasse, represents the best competitive cost," he states. The sunliquid technology won the 2015 German Innovation Prize for Climate and Environment.

RECENT HISTORY OF SCANIA'S WORK WITH ETHANOL IN BRAZIL

Renowned as a provider of ethanol solutions in Europe, Scania announced that it had begun testing ethanol-fueled buses in Brazil in 2007. After a demo period in São Paulo, the company announced the first sales of ethanol-fueled buses in Brazil. Viação Metropolitana, currently MobiBrasil, and Tupi Transportes, purchased 50 and 10 buses respectively, all of which would be used for public transportation. In October 2011, during the Fenatran convention, Scania launched the first ethanol-fueled large truck for Latin America. Scania is a global provider of sustainable solutions and offers products that run on alternative fuels such as biogas, natural gas, liquefied natural gas, biodiesel, bioethanol, hybrid diesel and electricity, as well as products that utilize hybrid ultracapacitors, a combination of ethanol and battery power, and hybrid diesel and biodiesel technology that meet Euro 6 standards. In Brazil, along with ethanol-fueled vehicles, the brand offers trolleybus chassis and busses that run on biomethane/GNV.

Source: Clariant International Ltd.





User-Friendly Tab Lists North American Dealers with Access to Supply of Airless Radial Tires for Skid Steer Loaders

Michelin Tweel Technologies has updated its dealer locator tab on its website, enabling customers to locate dealers who sell the award-winning MICHELIN® X® TWEEL® SSL airless radial tire in their area. The new tab is specifically designed for ease-of-use, offering one-click access to all key dealer information and available inventory for the MICHELIN® 12N16.5 X® TWEEL® SSL All Terrain and Hard Surface.

The X TWEEL SSL is Michelin's highly advanced airless radial tire designed for skid steer loaders. The only commercial product available to offer the advantages of no maintenance, no compromise and no

You can watch videos related to some of our featured stories on **WWW.infrastructures.com**

Watch for the

downtime - the X TWEEL SSL requires no air, thereby eliminating the risk of a "flat tire". The X **TWEEL SSL also** provides industrial, construction, agricultural and landscape users the advantages of no air pressure maintenance, easy mounting, damage resistance, increased operator comfort,

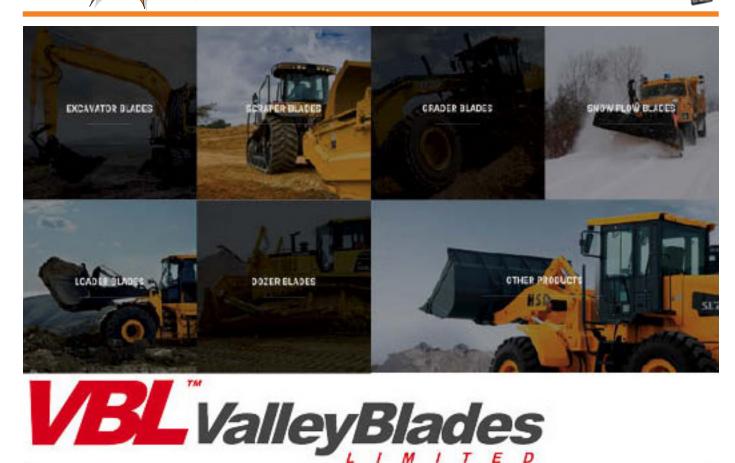


reduced operator fatigue and improved productivity.

The tab includes all dealers across the U.S. and Canada. Users can search dealers by location (address, city, state) or by ZIP

code. The tab can also be used to locate the MICHELIN® X® TWEEL® TURF[™] that is available exclusively on new John Deere ZTrak[™] 900 B, M or R Series mowers.

Source: Michelin North America



www.valleyblades.com • Contact your local Valley Blades Distributor

Université Laval Retakes Shell Eco-marathon Americas Title from University of Toronto

The 10th Shell Eco-marathon Americas ended on April 24 with 2 perennial favorites battling along the Motor City's

riverfront and downtown streets to see which custombuilt, ultra-energy-efficient vehicle would travel the farthest distance using the least amount of energy. The Université Laval team from Quebec regained the title from its Canadian rival, the University of Toronto.

The Laval team recorded 0.091 l/100 km (2,585 mpg)

with its gasoline-fueled prototype, but that mark fell short of its record 0.066 l/100 km (3,587 mpg) set in 2013. The University of Toronto team, whose vehicle finished with a best run of 0.099 l/100 km (2,364 mpg), had hoped to surpass its chief competitor's mark on its final attempt, but its vehicle failed to start.

More than 1,000 students from a record

124 teams representing 7 countries – Brazil, Canada, Ecuador, Guatemala, Mexico, Puerto Rico and the U.S. – competed over



3 days with 2 classes of vehicles. The Prototype class invites students to enter futuristic, streamlined vehicles, and the UrbanConcept class focuses on "roadworthy" fuel-efficient vehicles aimed at meeting the real-life needs of drivers.

Entries are divided by energy type:

• Internal combustion engine fuels: gasoline, diesel, liquid fuel made from natural gas and ethanol.

• Electric mobility: hydrogen fuel cells and battery electric.

THE WINNING TEAMS

On Saturday and Sunday, the vehicles drove 10 laps for a total distance of 9.65 km around the circuit at an average speed of 24 km/h. The winners in each class follow, based on vehicle class and energy source:

• Prototype gasoline: The Alérion Supermileage team, Université Laval of Quebec City, Quebec, 0.091 l/100 km (2,585 mpg).

• Prototype diesel: ShopGirls team, Granite Falls High School of Granite Falls, Washington, 0.21 l/100 km (1,115.1 mpg).

• Prototype battery-electric: Beyond team, Université de Sherbrooke of Sherbrooke, Quebec, 731.4 km/kWh (454.5 mi/kWh).

• Prototype hydrogen fuel cell: Queen's Fuel Cell team, Queen's University of Kingston, Ontario, 135 km/m³ (83.9 mi/m³).

· Prototype alternative: Tatonkatoo team,

Volvo Trucks Highlights Refuse-Focused Versatility, Capability at WasteExpo

Volvo Trucks North America brought its wide range of refusefocused truck models to WasteExpo 2016, held in Las Vegas, Nevada, from June 7-9.

Highlighting the versatility and capabilities refuse customers require, Volvo featured 3 models – a Volvo VNM, VHD and VNL – each designed with the refuse industry in mind.

"Whether for collection, roll off or transfer, our truck lineup serves the refuse industry well in a variety of applications," said Wade Long, Volvo Trucks director of product marketing. "That capability, combined with Volvo's quality, durability and fuel efficiency, offers customers a tremendous value proposition."

Volvo power and the Volvo I-Shift are standard on every model, with additional engine and transmission options available. All Volvo models also come standard with Volvo Remote Diagnostics, a telematics-based proactive diagnostic and repair planning system that helps customers avoid unplanned downtime by proactively monitoring critical fault codes in the engine, aftertreatment system and the Volvo I-Shift automated manual transmission. The system also identifies necessary parts and provides repair instructions, even before the truck arrives for service.

Source: Volvo Trucks North America



University of Colorado at Boulder, Colorado, 0.19 l/100 km (1,214.3 mpg).

• UrbanConcept gasoline: Mater Dei Supermileage team, Mater Dei High School of Evansville, Indiana, 0.30 l/100 km (793 mpg).

• UrbanConcept diesel: Knights 3, Alden-Conger High School of Alden, Minnesota, 0.45 l/100 km (525.1 mpg).

• UrbanConcept battery-electric: Experimental Vehicle Team Alpha, Saint Thomas Academy of Mendota Heights, Minnesota, 84.8 km/kWh (52.7 mi/kWh).

• UrbanConcept hydrogen fuel cell: Eco-Car Team, University of Alberta, Edmonton, Alberta, 66 km/m³ (41 mi/m³).

• UrbanConcept alternative fuel: Let's Do It Again 2, James B. Dudley High School of Greensboro, North Carolina, 173.3 I/100 km (107.7 mpg).

The event began 31 years ago in Europe and in addition to the Americas competition, Shell Eco-marathon is held annually in Europe and Asia. The unique competition challenges students around the world to design, build and drive the most energy-efficient cars.



In fact, UrbanConcept teams from across the Americas, Asia and Europe will compete at the first Shell Eco-marathon Drivers' World Championship, taking place on July 3, 2016 at the iconic Queen Elizabeth Olympic Park in London. The winning team will earn an invite to spend one week with Scuderia Ferrari at its facility in Maranello, Italy, where team members will receive personal coaching and advice from its engineers on how they can improve their car for the 2017 Shell Eco-marathon.

Teams headed to London with their vehicles include:

 Mater Dei High School, of Evansville, Indiana

 Alden-Conger High School, of Alden, Minnesota

• Saint Thomas Academy, of Mendota Heights, Minnesota

 Newburgh Free Academy, of Newburgh, New York.

Additional teams as guest spectators are the University of Alberta, of Edmonton, Alberta, and the University of Illinois, of Champaign, Illinois.

Source: Shell Oil Company



All-new Intake System Feeds Duramax Diesel

New for 2017, Chevrolet Silverado HD trucks feature a patented air intake system that drives cool, dry air into the engine for sustained performance and cooler engine temperatures during difficult driving conditions. The all-new air intake system provides 60% of the air to the Duramax diesel engine from an inlet at the front of the hood. The air provided to the engine is very close to the outside ambient temperature and much cooler than the air under the hood.

Cooler air helps the engine run better under load, especially in conditions where engine and transmission temperatures can rise quickly. Running cooler allows the Duramax diesel to maintain full power and vehicle speed for capable trailering in even the toughest conditions.



There is also a ram-air effect from the incoming air at highway speed that helps

ADDRESS CHANGES Update your subscription information or address changes via e-mail: subscriptions@infrastructures.com pack more air into the engine. The air filter housing also draws 40% additional air from a dry location in one of the front fenders. It blends with the cooler air from the hood inlet before funneling into the Duramax's combustion chambers. This assures the engine can breathe even if the hood is completely blocked.

Source: Chevrolet

McNeilus Launches Metro-Pak and M2-S Compactors in Saudia Arabia

McNeilus Truck & Manufacturing, Inc., an Oshkosh Corporation company, announced plans to market its McNeilus® Metro-Pak® and M2-S refuse compactor vehicles in Saudi Arabia and the surrounding region. The declaration was made at a ceremony co-sponsored by McNeilus, and Refuse Equipment MFG Holding Co. (REM) at the Ritz-Carlton hotel in Riyadh, Saudi Arabia in late March. McNeilus will work with REM to assemble, market and provide services for the completed vehicles through its extensive network of local service facilities, in combination with support from Oshkosh regional offices and personnel.

"The McNeilus Metro-Pak and M2-S compactor bodies are lightweight and durable and we believe meet the needs of the Saudi market," said Chris Zuniga, Oshkosh Commercial Group senior director of international sales and operations. "REM is an excellent company with an outstanding reputation, and we look forward to a



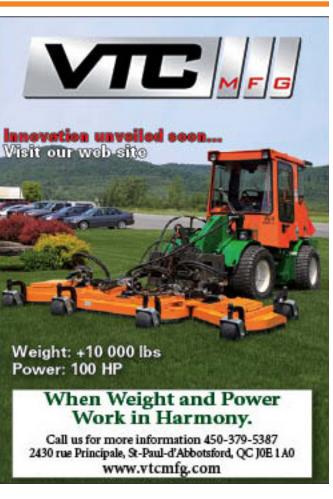
McNeilus announced plans to market its McNeilus[®] Metro-Pak[®] and M2-S refuse compactor vehicles in Saudi Arabia and the surrounding region. The declaration was made at a ceremony co-sponsored by McNeilus, and Refuse Equipment MFG. Holding Co. (REM) at the Ritz-Carlton hotel in Riyadh, Saudi Arabia in late March.

long and successful relationship with their entire team."

The McNeilus Metro-Pak and M2-S compactors will be manufactured in North America and shipped to Saudi Arabia. McNeilus personnel will provide on-site support and REM will assemble and mount the compactors locally onto a wide range of popular chassis. Both products will be marketed to municipal and commercial customers, and supported through Oshkosh regional offices and locally based sales and service personnel in Riyadh and Dubai, as well as through REM's extensive network of service facilities located throughout Saudi Arabia.

"The event in Riyadh provided us the opportunity to meet with more than 250 industry leaders – representing a wide range of municipalities and private clean-





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ing companies – and to demonstrate the McNeilus Metro-Pak and M2-S in action," said Mr. Zuniga. "The feedback we received was very positive; we are confident these McNeilus compactors – matched with the expertise of the professionals at REM – will benefit communities throughout Saudi Arabia."

The McNeilus Metro-Pak compactor, which is available in body capacities ranging from 11 m³ to 19 m³, features a large hopper, extensive use of high resistance steel, and single piece body panels for improved strength and durability. Its hydraulics and control systems are engineered for top-notch performance, enhanced reliability and ease of maintenance.

The McNeilus M2-S compactor is available in larger body capacities ranging from 13 m³ to 21 m³. The compactor can be mounted on a single rear axle chassis for enhanced maneuverability, while its compaction force allows for maximum productivity. The M2-S compactor is available with optional Excalibre[™] nitrided cylinders feature a larger bore design that provides for long stroke in a compact, powerful package.

Refuse Equipment MFG Holding Co. (REM) of Riyadh, Saudi Arabia is an industry leader in developing products serving commercial equipment markets, including garbage compactors, road sweepers, transfer trailers, containers, stationary compactors, static compactors, dumpers, telescopic aerial platforms, hook lifts, water tanks, fuel tanks, vacuum and jetting tanks, and other customer-specific products. The company operates a network of branch locations in major cities throughout Saudi Arabia to provide its customers with timely maintenance, repair, and other support services.

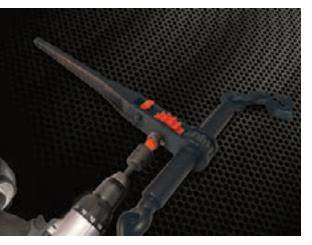
Source: McNeilus Truck & Manufacturing, Inc.

Paladin Attachments Launches New TwinDrive[™] Binders

Paladin Attachments has announced a new product launch in its Aftermarket Sales division. Paladin's new TwinDrive[™] Binders are in support of the company's ongoing commitment to customer service and aftermarket sales support.

TwinDrive[™] Binders can quickly tighten and loosen loads of prime mover equipment and attachments by using a cordless drill with socket for a totally powered

solution. The Binders offer significant operator time savings over standard ratchet binders and are ideal in confined spaces where a full rotation is not possible with a manual binder. TwinDrive[™] Binders are manufactured with heat-treated, forged components and have a reinforced bolt carriage with grease fittings for a maintenance-free, smooth operation and long life.



"Launching the TwinDrive[™] Binders is an exciting initial step in providing full-service solutions to our customers," commented David Garmenn, Parts manager for Paladin Attachments. "We want to provide efficient solutions to the dealer channel, as well as create an offering the end user will embrace. It's a commitment to our relationships throughout the channel." Source: Paladin Attachments

Fuji Heavy Industries Changes Name to Subaru Corporation, Focuses Resources on Automobile Division

Fuji Heavy Industries recently announced a name change to Subaru Corporation along with an operational change that will focus all engineering and financial resources on the quickly growing automobile division. The Industrial Power Products division will close after fulfilling all order commitments for 2017. Product parts and support will remain available indefinitely.

Subaru Industrial Power Products and Subaru Automobile have seen tremendous growth in recent years. With more demands for resources, the company will focus on the automobile division – in efforts to continue leading the industry in a number of automotive categories around the globe.

To make the transition as smooth as possible for its customers, Subaru intends to continue to supply spare parts for a reasonable period to meet market requirements. Additionally, customers will see no change in quality assurance of products.

Effective immediately, Fuji Heavy Industries suspends all new development projects of the industrial business. This includes not only newly received inquiries but current ongoing projects as well.

FHI will temporarily maintain the production, supply and servicing of existing models. The exact suspension date of these existing products has not yet been determined; but FHI's intent is to cease production of existing products by the end of September 2017. The company will keep customers informed of any further details regarding production.

Source: Subaru Industrial Power Products

Looking for a supplier's website?

Volvo Trucks Debuts New Powertrain at Truck World

Volvo Trucks North America's new 2017 integrated powertrain made its public debut at Truck World, held April 14-16 in Toronto, Ontario. Volvo's new powertrain delivers best-in-class performance, productivity, fuel efficiency and improved total cost of ownership for Volvo customers through numerous updates designed to increase fuel efficiency, productivity, reliability, packaging, comfort and uptime.

"We've experienced a positive response to our new 2017 powertrain since its introduction, and we're proud to be able to share it for the first time with the public here in Toronto," said Göran Nyberg, president of Volvo Trucks North America. "Not only are we furthering our leadership in integrated powertrain design, we're also raising customer expectations for fuel efficiency, power and performance."

Volvo's 2017 powertrain offerings feature a number of improvements that demonstrate Volvo's commitment to meet the needs of customers' full range of applications through integrated powertrain development.

"Our D11 and D13 engines were already among the most efficient in the industry, but we were confident that we could increase the efficiency further," said John Moore, Volvo Trucks product marketing manager – powertrain. "Thanks to several innovative new components, including new wave pistons and a turbo compounding system, we're able to boost fuel efficiency by up to 2.2% for the D11, up to 2.5% for the D13 and up to 6.5% for the D13 with Turbo Compound."

In addition to its new engines, Volvo made several updates to its I-Shift automated manual transmissions, resulting in faster shifting and improved performance. The I-Shift with Crawler Gears also was introduced for applications where extreme slow speeds and maneuverability are required.

"The new I-Shift with Crawler Gears



is suitable for both vocational and onhighway applications," said Allison Athey, Volvo product marketing manager – transmissions. "Not only does it enable applications such as curb pouring and asphalt paving, the crawler gears also offer improved startability for heavy haul and up to 100,000 kg or more GCW based on application approval."

Source: Volvo Trucks North America

Even Under Load – Still Width-Adjustable

With its DualMAX, Faymonville was recently able to present another new product. This modular semi-trailer can be widened in loaded condition and was designed for the special requirements of heavy goods traffic in North America.

Faymonville once again highlights its role as an innovative pioneer in the sector. With the DualMAX, a vehicle type could once again be presented that combines cutting-edge technology with extremely practical development. This combination also impressed American Heavy Moving & Rigging Inc. from Chino, California. The transport company immediately equipped its vehicle fleet with 36 axle lines of the new DualMAX.

Some very specific features characterize this new product family.

"All axles under load can be easily and securely widened from 4.27 m to 6.1 m," reports Paul Hönen, sales manager in North America. "We've baptised this unique and patented principle 'lift&shift'. In this way the loading platform can be adapted to the size of the load or its distribution on the ground. In contrast to other suppliers, the steering system doesn't need to be disassembled for the widening process, everything stays in place. And the tried-and-tested swing axle technology guarantees optimal maneuvering".

The DualMAX meets the statutory provisions that apply in the U.S. and Canada.

"Faymonville's DualMAX has a very strong and torsion-resistant chassis with high point load capacities on the central beam and the outer frames," notes Earl Sutton, owner of American Heavy Moving & Rigging, who found a competent partner in Faymonville. "At 4,535 kg/axle line the DualMAX has an optimal payload to net weight ratio."

The flexible vehicle concept thus permits a load per axle line of 23,995 kg at 80 km/h. The foldable frame (to less than 3.05 m)



makes easy return transport possible on a conventional semi-trailer. The chassis of the DualMAX is fully metallised (zincplated), thus offering the best corrosion protection available on the market.

Besides American Heavy Moving, other transport companies such as Mountain Crane Service of Salt Lake City, Utah, and Steve Sharp Transportation, Inc. of Cokeville, Wyoming, could already be won over as new DualMAX customers.

Source: Faymonville Distribution

New 2017 Hino 258 High Horsepower Model

Hino Motors Canada, Ltd. released its new high horsepower 258 model in April, just in time to showcase at Truck World, held in Toronto, Truck World, held April 14-16 in Toronto, Ontario.

The Hino 258 low profile truck is powered by Hino's legendary 7.6 l diesel engine producing 230 hp and 520 lb ft of torque. A high horsepower engine option is available producing 260 hp and 660 lb ft of torque on the 550 cm (217") wheelbase model. Combined with a 6 speed Allison FuelSense® automatic transmission, the Hino 258 delivers the extra boost in power perfectly suited for towing and recovery

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applications.

"Hino has long enjoyed a loyal following from tow operators. The Hino 258 high horsepower model is an exciting addition to Hino's expanding product line," commented Eric Smith, senior vice president of Sales and



Customer Support at Hino Canada. "This new product is ideal for tow operators that require optimum performance and durability in extremely difficult conditions."

Hino offers an impressive list of standard features including air conditioning, driver's air suspension seat, keyless entry, and Bluetooth[®]. Every new Hino conventional medium duty truck comes with Hino Premium Protection, a comprehensive vehicle maintenance and protection plan that is included at no additional charge for added peace of mind. The plan includes a 5 year / 400,000 km limited Hino engine warranty.

The new trucks will be produced at Hino's Canadian assembly plant located in Woodstock, Ontario.

Source: Hino Motors Canada, Ltd.



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Canada's Longest Established Sullair Distributor Acquires a Maritime Partner

Comairco Equipment Limited, a distributor of Sullair electric and diesel compressors in Canada and the U.S., has acquired Atlantic Compressed Air Limited, the Sullair distributor for the Atlantic provinces.

Established in 1972, one year prior to Atlantic Compressed Air opening their doors, Comairco grew up in Canada's industrial heartland. Headquartered in Laval, Quebec (just north of Montreal), Comairco has grown into a company spanning no less than 4 provinces: Quebec, Ontario, Manitoba and Saskatchewan; and 2 U.S. states: New York and New Jersey.

With more than 180 employees and 19 branches, the acquisition of Atlantic Compressed Air firmly positions Comairco on the eastern seaboard and adds 4 more branches to the company – and an additional 80 years of compressed air industry experience to its team.

Atlantic Compressed Air unveiled its new Comaircostyled logo, and highlighted its new relationship as a division of Comairco Equipment Limited, at the 2016 Skills



This National Competition hosts ap-

DEUTZ XChange to Provide Remanufactured Engines for JLG's AWP Reconditioning Program

DEUTZ Corporation will provide JLG Industries, Inc. with DEUTZ Xchange remanufactured engines for its aerial work platform (AWP) reconditioning program.

"JLG was particularly pleased with the 3-year transferrable warranty that we offer on all our DEUTZ Xchange engines," said Robert Mann, DEUTZ Corporation's president and CEO. "That warranty, our quality product and



the fact that our remanufactured engines can be serviced by any DEUTZ distributor were key factors that helped us earn this business."

According to Christopher Mellott, JLG Industries vice president of aftermarket sales in North America, the JLG reconditioning program is a leader in the lift and access, construction and rental industries, thanks in large part to the scope of work. "JLG has very strict OEM guidelines that we follow for all of our reconditioned products. Our scope of work is very detailed, making our reconditioning program similar to our new manufacturing program. In the end, customers receive a machine that has the same reliability as a new one."

The program provides buyers looking to grow their fleets or replace worn equipment with an option at approximately half the cost of a new unit.

The DEUTZ-JLG partnership has already begun to pay dividends for both companies. One of North America's largest equipment rental companies recently purchased 137 reconditioned AWP units from JLG, explicitly requiring that DEUTZ Xchange engines be installed in each.

Source: DEUTZ Corporation



prentices and trades people from across Canada and showcases not only skills, but also new technologies in manufacturing and fabrication.

Atlantic Compressed Air provided not only the compressed air for the venue (installing a Sullair 100 hp 7500B compressor alongside a Sullair RD400 dryer and tank), but also all of the materials and labor for plumbing the show floor with TransAir Legris piping to distribute that compressed air and meet the needs of the pneumatic machines used in the competition.

"We couldn't think of a more fitting forum to introduce the nation to our new relationship!," said Tom Bourgeois, manager at Atlantic Compressed Air.

"In our 40-plus year partnership, we've watched Comairco steadily expand throughout Canada and the Northeastern United States," said Kent Van Sickle, eastern regional sales manager for Sullair. "Comairco's acquisition of Atlantic Compressed Air will add to their capacity and geographic presence, and we will fully support their expanded market share. Comairco's commitment to superior service and broad offerings will surely lead to success in the region."

Source: Comairco Equipment Limited

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Appointments

Minnich Manufacturing, a leading manufacturer of concrete dowel pin drills, concrete paving vibrators and vibrator monitoring systems, is pleased to announce that **Paul Jaworski** has joined the company's research and development team.



Mr. Jaworski brings to Minnich 37 years of experience in concrete vibration technology innovation. In his new role, he will focus on developing

innovative products to meet rapidly changing concrete vibration needs.

"At Minnich, we understand that our OEM partners and end users expect us to deliver industry-leading innovation," said Jim Minnich, company owner. "Paul's experience and expertise will further strengthen our concrete vibration R&D capabilities. We're excited to add him to our growing company."

Paul Jaworski's past product accomplishments include monitored vibrator systems for pavements, controlled speed vibrators for vertical applications, and product safety compliance. He also has extensive technical committee, association board, standards specification, and field task force experience.

Source: Minnich Manufacturing

Hilde Merete Aasheim, executive vice president of Norsk Hydro ASA's primary metal business, has been appointed chair of the International Aluminium Institute (IAI), at the 89th meeting of its Board of directors in Shanghai, China.

Ms. Aasheim takes over from Abdulla Kalban, CEO of Emirates Global Aluminium, who stands down at the end of his 2 year tenure.

"It is a great honor for me to have been elected by my peers to Chair the Institute at this time of unprecedented change in the aluminium industry," said Hilde Merete Aasheim. "I look forward to building on Abdulla's achievements over the last 2 years to advance further the role our modern metal plays in improving people's quality of life, through its innovative applications and unique properties."

IAI secretary general Ron Knapp paid tribute to the leadership of Mr. Kalban: "Abdulla's engagement during his term of office reflects his commitment to a strong industry and to a metal of the future. We are pleased that he will continue to be actively involved in the Institute's work in the coming years as IAI vice chair and look forward to the next 2 years under the leadership of Ms. Hilde."

Source: International Aluminium Institute

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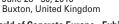
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Agenda

Hillhead 2016

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APOM Technical Day September 16, 2016 Drummondville, QC Canada

2016 World Canals Conference September 19 - 22, 2016 Inverness, United Kingdom

InnoTrans 2016 September 20 - 23, 2016 Berlin, Germany

DEMO INTERNATIONAL 2016 September 22 - 24, 2016 Maple Ridge, BC Canada

MineExpo September 26 - 28, 2016 Las Vegas, NV USA

IFAT India September 28 - 30, 2016 Mumbai, India

Xplor 2016 October 5 - 6, 2016 Montreal, QC Canada

9th Annual WaterSmart Innovations (WSI) Conference and Exposition October 5 - 7, 2016 Las Vegas, NV USA

ExpoTunnel 2016 October 19 - 21, 2016 Bologna, Italy

INFRATURK Exhibiton & No-Dig Conference and Exhibiton October 20 - 23, 2016 Kocaeli, Turkey

Offshore Energy Exhibition & Conference October 25 - 26, 2016 Amsterdam, The Netherlands

Waste & Recycling Expo Canada November 9 - 10, 2016 Toronto, ON Canada

BAUMA China November 22 - 25, 2016 Shanghai, China

Pollutec 2016 November 29 - December 2, 2016 Lyon, France

BAUMA CONEXPO INDIA December 12 - 15, 2016 Gurgaon/Delhi, India

IFAT Eurasia February 16 - 18, 2017 Istanbul, Turkey

CONEXPO-CON/AGG 2017 March 7 - 11, 2017 Las Vegas, NV USA

NASCC: The Steel Conference March 22 - 25, 2017 San Antonio, TX USA

SMOPYC. April 4 - 7, 2017 Zaragoza, Spain

National Heavy Equipment Show April 6 - 7, 2017 Toronto, ON Canada

ExpoCam, Canada's National Trucking Show April 20 - 22, 2017 Montréal, QC Canada

APEX May 2 - 4, 2017 Amsterdam, The Netherlands



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A newcomer in the Class 7 & 8 Cabover category

The oldest North American truck brand, Autocar® enters the Class 7 & 8 cabover market with a range of trucks designed for heavy work such as road maintenance and heavy pick-up and delivery, the Autocar Xpert.





The Autocar Xpert is designed to ensure the best sight lines in any cabover or conventional truck. The spacious cab features a huge windshield, side, and rear windows.

The Autocar Xpert can be equipped with an OEM dual steering system. With all controls placed either in the middle, or duplicated and mirrored on both sides.

The high performance dual steering gear system is designed for an extra tight turning radius, and the electrical system is designed for dual steer from the ground up, with no third party splicing into a wire harness.







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