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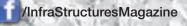
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A Brief Word...

With this heat wave and humidity your thoughts are probably of something cold to drink rather than the cold of Old Man Winter. As ever in August, InfraStructures has done it for you.

This month you will be briefed on products and projects not just winter related, but there is enough in our pages to get you thinking ahead before the autumn crunch comes. As usual there is the news and events of shows and innovations that may help you plan for the future and make your operations more efficient and cost effective.

Recent industry trends in this slug-like economy are indicating contractors are moving away from capital equipment purchases and upping their rental and RPO activity. It has long been a useful tool in the salesperson's arsenal, particularly in Canada when exchange rates hike equipment prices. Expectations are that rental revenues will be in the 5-6% range until 2018 continuing a trend begun in 2011.

This could be double good news for Canadian suppliers and users of equipment because it promises that new product can be better budgeted and that there will be a growing stock of late model items with high depreciation available out of the U.S.

Whether you use your copy as a fan, or get a chill from reading about winter operations, InfraStructures remains your primary information tool.

Keep Cool and Carry On!



On the cover:

CCS Constructors, Inc., of Morrisville, Vermont, used 2 Link-Belt cranes to erect over 1,360 t of structural steel and place 250 concrete retaining wall panels for the construction of the new Spruce Peak Adventure Center and Alpine Club buildings at Stowe Mountain Resort.

MANITOU WELCOMES NOTRE DAME MOTORS TO ITS DEALER NETWORK

Manitou is pleased to welcome Notre Dame Motors Ltd to the Manitou dealer network. Notre Dame Motors provides expert sales, service and parts support for Manitou agricultural/multi-purpose telescopic loaders to Notre Dame de Lourdes, Manitoba, and the surrounding area.

"We are excited to enter into a new partnership with Notre Dame Motors Ltd,"

said Eric Burkhammer, Manitou Americas vice president of sales and marketing. "We are confident that the Manitou MLT series telescopic loaders will be a strong asset for the Manitoba agricultural market."

Manitou is the world leader in all-terrain material handling equipment such as telescopic handlers, rough terrain vertical masted forklifts, semi-industrial vertical masted forklifts, and truck-mounted forklifts used worldwide in construction

and agricultural applications. Founded in 1957, Manitou Group, is headquartered in Ancenis, France.

Source: Manitou Americas

GILBERT ADDS NEW DEALERS FOR THE GRIZZLY MULTIGRIP™ VIBRATORY PILE DRIVER

Gilbert Products Inc. is proud to announce the expansion of its dealer network to Western Canada with 3 new dealers: Canadian Pile Driving Equipment, Shear-Force Equipment and Accudraulics.

Canadian Pile Driving Equipment becomes the Grizzly MultiGrip™ dealer in Alberta and Saskatchewan while Shear-Force Equipment and Accudraulics are respectively appointed dealers in British Columbia and Manitoba.

"We are very proud of these partnerships and are looking forward for long-term and successful collaboration," declared Alex Gravel, director of sales and marketing at Gilbert Products.

Founded in 2009 and located in Lacombe, Alberta, Canadian Pile Driving Equipment provides a full line of service and parts that complement the best purpose built pile-driving equipment made. CPDE offers excellent service and training to their customers.

ShearForce Equipment, a division of West Coast Machinery Ltd. located in Abbotsford, British Columbia, is a leading provider of attachments for excavators, tractors, back-hoes skid steer loaders. A family-run business for 3 generations, ShearForce stands behind its products with comprehensive customization, maintenance, and repair services.

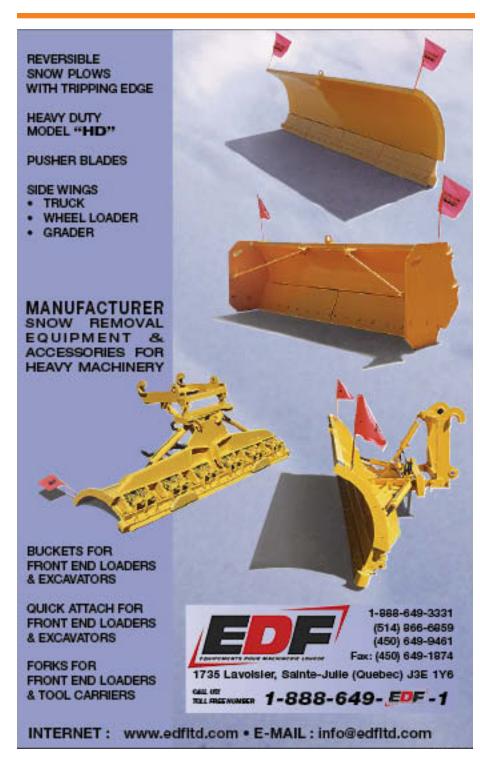
Accudraulics Inc., based in Winnipeg, is a dedicated source for heavy-duty hydraulic equipment and servicing in Manitoba.

Gilbert Products is a leader in the design, manufacturing and marketing of forestry, sawmilling and construction equipment and snow groomers since 1986. The company is located in Roberval, Quebec, and employs more than 100 employees.

Source: Gilbert Products Inc.

BULROC (UK) LTD PART OF ROBIT GROUP

Bulroc (UK) Ltd is a leading supplier in the business of big Down-the-Hole hammer and related accessories. The company is focusing on this product segment and is especially known for its product performance and quality. Bulroc (UK) Ltd is



based in Chesterfield, England. In addition, the company has a sales office in Hong Kong. Bulroc (UK) Ltd has altogether 46 employees.

Through this acquisition Robit Plc strengthens significantly its Down-the-Hole business area. Through the 2 simultaneous acquisitions – Bulroc (UK) Ltd and Drilling Tools Australia Pty Ltd (DTA) – Robit Plc becomes a remarkable global supplier in this Down-the-Hole business segment. It is notable that the two acquired companies' product ranges support each other.

These acquisitions mean that Robit Plc's cumulative net sales will overcome € 75 million (\$107 million) The company looks for a further active growth in each 3 strategic business area: Down-the-Hole, Top Hammer and Digital Services.

Source: Robit Plc

BRITISH COLUMBIA SEEKING QUALIFIED FIRMS FOR MASSEY REPLACEMENT

The Government of British Columbia has issued a Request for Qualifications (RFQ) for parties interested in delivering the George Massey Tunnel Replacement Project.

The project will be procured through a public-private partnership to design, build, partially finance, operate, maintain and rehabilitate the asset for a term of 30 years. This procurement approach best provides value to taxpayers. The RFQ is the first of a two-phase procurement process. Following the RFQ, government will request proposals from a shortlist of the 3 best-qualified teams in order to select a preferred proponent.

The procurement process for the George Massey Tunnel Replacement Project follows the guidelines of the Capital Asset Management Framework, Ministry of Finance Core Policies and Procedures, and Partnerships BC best practices.

Safety benefits of the project include a design that meets modern seismic standards, unlike the current tunnel; additional lanes that make merging safer for all vehicles and will reduce collisions by an estimated 35%; and wider lanes and shoulders that will improve safety and emergency response times.

The new bridge and associated highway improvements, including dedicated transit lanes, will cut some commute times in half and also improve travel-time reliability for the 10,000 transit passengers and more

than 80,000 vehicles that use the tunnel each day.

Transportation Investment Corporation (TI Corp) will undertake the project and recover project costs through user tolls. The private partner will be responsible for financing a portion of the capital costs of the project.

The project includes:

- Construction of a 10-lane bridge built to modern seismic standards, with 4 general travel lanes and one dedicated transit/ HOV lane in each direction;
- Replacement of 3 interchanges at Westminster Highway, Steveston Highway, and Highway 17A;
- Widening of approximately 24 km of Highway 99 to accommodate dedicated transit/HOV lanes from Bridgeport Road in Richmond to Highway 91 in Delta;
- · Replacement of the Deas Slough Bridge;
- Construction of multi-use pathways on either side of the bridge for cyclists and pedestrians; and
- Decommissioning of the tunnel.
 It is estimated that about 9,000 direct jobs will be created over the life of the George Massey Tunnel Replacement Project.
 Construction will begin in 2017, with the bridge opening in 2022 and tunnel decommissioning in 2023.

Source: B.C. Ministry of Transportation and Infrastructure

MANITOU AMERICAS INTRODUCES ALL-NEW XPRT™ PROTECTION PLAN

Manitou Americas, Inc. introduces XPRT™ Protection Plan an all-new extended protection program specifically designed for Gehl and Mustang branded equipment. "XPRT Protection Plan offers wider coverage options, longer coverage terms, and a better value for the end-customer than the previous Power Protection Plan", stated David Harrison, director of after sales, Manitou Americas, Inc. "XPRT Protection Plan will provide customers additional confidence in their investment by reducing maintenance costs and improving the overall resale value of their equipment; both of which are key components of our global 'Total Cost of Ownership' strategy".

XPRT™ Protection Plan offers a great deal of flexibility with multiple customizable coverage levels up to 5 years or 6,000 hours, enabling the dealer and the end-customer to choose the plan that best fits their application, usage level, and financial budget.

Source: Manitou Americas, Inc.

CASE CE ANNOUNCES "DIAMOND DEALER" AND "GOLD DEALER" AWARD WINNERS

CASE Construction Equipment has released its list of 2016 "Diamond Dealer" and "Gold Dealer" award recipients as a part of its North American Construction Equipment Partnership Program. The awards recognize dealerships across the U.S. and Canada for leadership in growing the CASE dealer network, as well as excellence in 5 categories: sales performance, marketing and communications, product support, parts support and training.

The 2016 Diamond Dealer award winners from Canada are: J.R. Brisson

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Equipment, Ontario, Kucera Farm Supply, Ontario, and Redhead Equipment, Saskatchewan.

The Canadian 2016 Gold Dealer award winner is Longus Equipment, Quebec.

"I would like to congratulate these exemplary dealers who have displayed true leadership and dedication in growing the CASE brand," says Scott Harris, vice president for CASE Construction Equipment in North America. "These high-performing dealerships live up to the CASE brand promise throughout every aspect of their business; hiring the right people, delivering a differentiated level of service in market, and building enduring relationships with customers."

CASE's Partnership Program is designed

to increase dealer performance per the results of a dealer assessment while encouraging them to excel in their role as a "Professional Partner" to customers.

Source: CNH Industrial

ENHANCEMENTS BEING MADE TO OVER-SIZE/OVERWEIGHT PERMITTING PROCESS

Through the joint Government of Ontario/Ontario Road Builders' Association (ORBA) Open for Business Roundtable process, changes are being implemented to the Oversize/Overweight (O/O) permit process in the province of Ontario.

The Ministry of Transportation (MTO) plans to change the duration of a single trip permit from 4 days to 7 days and extend weekend travel to include loads

over current annual dimensions (with the exception of police-escorted loads).

"Finding ways to reduce paperwork and the administrative burden on businesses without compromising safety is the ultimate win-win," said the Hon. Steven Del Duca, Minister of Transportation. "By working with ORBA, the Ministry has made improvements that will help streamline processes and improve the speed of permitting without sacrificing security."

In December, the O/O Permit Application Process was one of 5 issues presented at the Opening Roundtable for review to address concerns identified with the current O/O permit wait times and to improve efficiencies and effectiveness of the permit application process. As part of the Roundtable process, ORBA members populated a working group that worked with the MTO to suggest ways to improve the permitting process and help reduce the administrative burden on companies applying for permits.

"ORBA is pleased by the changes being implemented to the oversize/overweight permitting process," said Ashley De Souza, ORBA director of Government Relations. "The changes to the permitting process will help improve the turnaround time for companies to obtain permits, improve business efficiency, speed up time to complete construction projects and create greater value for taxpayers."

The partnership between ORBA and the Province of Ontario in an Ontario Open for Business Roundtable, has helped remove barriers and burdens to businesses in the road building industry by reducing the time and effort that ORBA members spend complying with provincial requirements.

ORBA supports and promotes the growth of Ontario's transportation infrastructure industry. As the voice of over 200 road building contractors and suppliers, ORBA members build and maintain the majority of Ontario's provincial highway system, municipal roads, bridges and other public transportation infrastructure, employing over 30,000 workers. Visit orba. org for more information.

Source: Ontario Road Builders' Association (ORBA)

BREAKTHROUGH 15-SECOND FLASH CHARGING TECHNOLOGY ENABLES EMISSION-FREE PUBLIC TRANSPORT

ABB has been awarded orders totaling more than \$16 million by Transports

Hillhead 2016, A Success!

WipWare president Tom Palangio spent some time in the UK with Mike McLoughlin, the director of Rockmate Ltd (middle) and Alexander Kartashev from DSK Limited (right), attending meetings and Hillhead 2016, which took place June 28-30 at Tarmac's Hillhead Quarry, near Buxton, Derbyshire.

While on-site, Mr. Palangio was able to offer live demonstrations of WipWare's latest fragmentation analysis



software, with recently implemented GIS capabilities. "The new iPad interface looks great, and the auto-scaling feature will allow users to get real-time, accurate data at the blast pile," said Mr. McLaughlin, whose Rockmate blast optimization software will work hand-in-hand with WipWare's latest offering.

A record 18,961 visitors attended this year's event – representing a 7.2% increase in attendance over the previous show in 2014 – with 476 exhibitors expressing great satisfaction with the number and quality of visitors who came. The second day's rain did little to dampen attendance and kept the dust down at the working face where numerous machines demonstrated their features.

Billed as the largest working quarry show in the world, Hillhead hosts this event every 2 years and plans are already underway for Hillhead 2018.

Based in North Bay, Ontario, WipWare designs and manufactures photoanalysis software and hardware that offers real-time analysis of materials in the field, laboratory, on-line production settings for underground and surface mining, quarries, aggregate production, forestry, coal industries and many more. WipWare makes stationary and mobile systems for conveyors, haulage trucks and site-specific locations. WipWare's photoanalysis systems have helped companies worldwide save millions of dollars by preventing equipment down-time, improving productivity, enhancing personnel health and safety and optimizing processes.

Source: WipWare Inc.

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Ability to drive round pile







Publics Genevois (TPG), Geneva's public transport operator, and Swiss bus manufacturer HESS, to provide flash charging and on-board electric vehicle technology for 12 TOSA (Trolleybus Optimisation Système Alimentation) fully electric buses (e-buses) which will run on Line 23, connecting Geneva's airport with suburban Geneva. The e-buses can help save as much as 1,000 t/y of CO₂, when compared with existing diesel buses.

ABB will deliver and deploy 13 flashcharging stations along an urban transit bus route, as well as 3 terminal and 4 depot feeding stations. This will be the world's fastest flash-charging connection technology taking less than 1 second to connect the bus to the charging point. The onboard batteries can then be charged in 15 seconds with a 600-kW boost of power at the bus stop. A further 4 to 5 minute charge at the terminus at the end of the line enables a full recharge of the batteries. The innovative technology was developed by ABB engineers in Switzerland.

The decision to deploy TOSA on Line 23 was undertaken after the successful pilot of the first such e-bus on the route from Geneva airport to the Palexpo exhibition center. The Line 23 bus route will be slightly modified in order to provide a fast connection to Praille-Acacias-Vernet, a new

suburb being built to accommodate 11,000 flats and office space for about 11,000 employees. When fully commissioned in 2018, the high-capacity articulated buses will depart from both terminuses at 10-minute intervals during peak times. The line carries more than 10,000 passengers a day and the replacement of diesel buses by TOSA e-buses reduces noise as well as greenhouse gas emissions.

As part of a separate award by HESS, ABB will supply 12 flexible drivetrain solutions for the buses including integrated traction and auxiliary converters, roof-mounted battery units and energy transfer systems (ETS), as well as permanent magnet traction motors. Both contracts include 5-year maintenance and service agreements to ensure operational reliability, efficiency and safety.

Geneva is one of the world's leading cities, recognized as a global center of diplomacy, a financial hub and a technology and innovation center. It is also a popular tourist destination with a high quality of life. It hosts the highest number of international organizations in the world, including global headquarters of institutions like the United Nations and the Red Cross.

ABB provides a range of technologies to support mobility applications such as railways, metros and electric buses and vehicles. Transportation and Infrastructure is one of the 3 customer groups, served by ABB alongside utilities and industry, and sustainable mobility is a key focus area within ABB's Next Level strategy.

Source: ABB Ltd.

Liebherr Concrete Pumps Are Now Available in Canada

Liebherr concrete pumps are now available in Canada through Liebherr Canada Ltd. With a head office in Burlington, Ontario, and 10 additional branches around Canada, Liebherr Canada offers reliable customer service and prompt spare parts availability.

Customers can expect robust and durable concrete pumps which



are developed and produced in Germany and are equipped exclusively with quality components from renowned manufacturers. Liebherr truck-mounted concrete pumps are available with booms sizes of 24 to 50 m and come in innovative Z, R or M-fold designs. Primarily the 41 m truck-mounted concrete pump is destined for the Canadian market and other models such as the 50 m pump are following soon. The boom is extremely torsion resistant, ensuring that vibrations are reduced to an absolute minimum when unfolding at the construction site. To ensure a balanced weight distribution, the concrete pipeline is configured close to the boom on both left and right hand sides. An array of design features has been introduced to simplify the replacement of wear parts for ease of servicing.

The patented XXT narrow support is designed for low torsion and is extremely robust. The front and rear outriggers are secured directly onto the boom pedestal of the distributor boom, ensuring that all forces are channeled directly into the outriggers and not into the truck chassis frame. Four pivoting outriggers guarantee maximum flexibility and an extremely wide swing range of the distributor boom when working in a narrow configuration. This can prove significant when working on building sites with limited access. The pump cell units come in capacities from 66 to 167 m³/h and showing a remarkable smooth pumping performance even for extreme stiff concrete types. More pump cell options and many more optional accessories and equipment are available.

In addition to truck-mounted concrete pumps, Liebherr Canada Ltd will also distribute stationary concrete pumps from Liebherr which are available as trailer and as crawler pumps with outputs ranging from 71 to 135 m³/h.

Source: Liebherr Canada Ltd.

WORLD'S FIRST ELECTRIC ROAD OPENS IN SWEDEN

The world's first electric road is being inaugurated near the city of Gävle in central Sweden, the result of a unique partnership demonstrating the path towards fossil-free transportation. Scania is supplying with the electrically-powered trucks, which will operate under real traffic conditions.

Opened on June 22, the 2-km strip on the E16 motorway sees electrified trucks from Scania driven in open traffic, using conductive technology developed by Siemens.

The beauty of the new technology, which is the result of several years of cooperation between the Swedish Government and the private sector, is that it permits the trucks to operate as electric vehicles when on the



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Contact Hercules Machinery today for more information about pile driving equipment and the Sonic SideGrip® at 800-348-1890. Over the past 17 years, Hercules Machinery Corporation (HMC) has developed and enhanced the Sonic SideGrip*. With this knowledge and expertise gained over the last 17 years, HMC has been able to bring value and superior service for their customers. Heneault Gosselin, Inc is one of HMC's customers that has seen first hand the value that the Sonic SideGrip* can bring to the company.

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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electrified road and as regular hybrid vehicles at other times. All the Scania trucks on the road are hybrid and Euro 6-certified, running on biofuel.

The truck receives electrical power from a pantograph power collector that is mounted on the frame behind its cab. The pantographs are in turn connected to overhead power lines that are above the right-hand lane of the road, and the trucks can freely connect to and disconnect from the overhead wires while in motion.

When the truck goes outside the electrically-powered lane, the pantograph is disconnected and the truck is then powered by the combustion engine or the battery-operated electric motor. The same principle applies when the driver wants to overtake another vehicle while on the electrified strip of the road.

The investment in the Electric Road E16 program in Gävle is a result of a programme for the public procurement of innovative solutions that was launched by Swedish authorities. The program consists of about SEK77 million (\$11.7 million) in public money, with about SEK48 million (\$7.3 million) in co-financing from the business community and the Gävleborg regional authority, which administers the area of Sweden where the electric road is situated.

The Swedish transport authority
Trafikverket, the Swedish Energy Agency
Energimyndigheten, innovation agency
Vinnova, Scania and Siemens are the main
funders of the technology, while Region
Gävleborg is the project coordinator.

Scania's sees the electric road as being a key component in achieving Sweden's ambition of an energy-efficient and fossilfree vehicle fleet by 2030. It can also help to strengthen Sweden's competitiveness in the rapidly-developing area of sustainable transport.

Source: Scania

DANA HOLDING CORPORATION TO CHANGE NAME TO DANA INCORPORATED

Dana Holding Corporation announced changed the company name to Dana Incorporated, effective August 1st, 2016. The evolution is aimed to better reflect how the company conducts its business in the global marketplace – as a unified organization with an intense focus on customer satisfaction, manufacturing excellence, and advanced technology across all mobility

sectors.

"This is a historic and significant pronouncement by our company," said James Kamsickas, Dana president and CEO. "Dana operates as a unified global manufacturer and supplier of goods and services to the vehicular industry. Our new name connects with the cohesiveness of the Dana team members and our united commitment to provide exceptional performance to our stakeholders."

Dana will continue to operate 4 business segments focused on power conveyance and energy management solutions for 3 key end markets. The iconic company logo, the Dana Diamond, will remain as the corporate mark. In addition, the New York Stock Exchange ticker symbol DAN, the organizational structure, and leadership team will continue.

Source: Dana Incorporated

CARDINAL EQUIPMENT EXPANDS MOR-BARK TERRITORY, ADDS TREE CARE PRODUCT LINE

Morbark, LLC, is pleased to announce the territory and product line expansion of Cardinal Equipment, Inc. Previously a Morbark industrial equipment dealer and distributor for the Boxer® line of compact utility loaders, Cardinal will now offer Morbark Tree Care Products in Ontario, south of the 46th parallel. Cardinal opened a new location in Port Perry, to help facilitate this expansion.

"Earlier this year, Cardinal became Morbark's first international dealer to reach Gold Tier status for our industrial equipment line," said Mark Rau, Morbark director of Dealer Support. "This means they provide more than just our high-performance equipment; they give our customers local knowledge and support to help them grow and maintain their businesses. We're proud to have them in the Morbark family and excited to have them expand to our tree care customers in eastern Ontario."

Cardinal Equipment represents all Morbark equipment in Quebec, eastern Ontario, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland.

Source: Morbark, LLC





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- LIGHTWEIGHT UNIT
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- LOW OPERATING COST
- HOOK UP IS QUICK & EASY
- IDEAL FOR BRIDGES WITH LOW CLEARANCE
- EASILY NAVIGATES DOWN NARROW PATHS
- LOW CAPITOL INVESTMENT





PERI Balanced Cantilever Solution Ensures Optimized Workloads

In the course of the European Route E6 expansion in Norway, the plans include a 320 m long bridge which spans the Gudbrandsdalen Lågen river. For the bridge superstructure, PERI civil engineering technology experts developed a balanced

cantilever solution based on the VARIOKIT **Engineering Construc**tion Kit. In particular, the high degree of flexibility with regard to the geometrical adjustments to suit the superstructure crosssection has supported the rapid construction of the individual concreting sections while simultaneously ensuring optimized workloads.

The Norwegian administrative authority responsible for public road building, "Statens vegvesen", selected an extradosed cablestayed bridge for the bridge construction. Thus, the Harpe Bru is the first bridge with this design technology in Norway. This technology combines the load-bearing behavior of a cable-stayed

bridge with that of a girder bridge whereby the tendons are positioned outside the bridge cross-section. As a result, the overall height of the superstructure as well as the height of the pylons can be kept at relatively low level. The slightly inclined stay cables support the superstructure and simultaneously tension it.

Altogether, the bridge is 320 m long with the largest section of around 100 m

positioned over the middle of the river between the 2 pylons. On land, 2 additional piers along with the abutments have been arranged.

The Polish subsidiary of the Porr Group was commissioned to undertake the



Simple connecting means and the compatibility of the VARIOKIT Engineering Construction Kit with the PERI UP Modular Scaffolding have facilitated safe access and working platforms in all areas.



Another requirement for the bridge formwork was the realization of a board-type structure for the concrete surface.

construction of the bridge. This, in turn, developed a very cost-effective balanced cantilever solution for realizing the bridge superstructure in close cooperation with PERI engineers in Poland. The PERI Balanced Cantilever Equipment is based on standard components taken from the VARIOKIT Engineering Construction Kit. These are available in PERI rental parks – and thus all required quantities can be

delivered at short notice as well as favorable terms and conditions.

The primary challenges for the implementation of balanced cantilever formwork are the geometric cross-sectional changes of the superstructure and the varying,



During the planning process, PERI specialists also had to take into consideration the suspension cables with which the segments are suspended on the pylons. At no time during the execution were they allowed to collide with the Balanced Cantilever Equipment.



One particular challenge during the formwork planning was taking into consideration the 130 cm high transverse ribs on each bridge segment.

in part, very high loads. In addition, the cross-section of Harpe Bru superstructure required the realization of transverse ribs between the lateral cantilever of the car-



reaches more heavy machinery and specialized equipment users than any other trade magazine in Canada.

The Media Kit is available on InfraStructures' website at www.infrastructures.com



riageway slab and the hollow box girders. Furthermore, the engineers had to take into consideration during the planning stage the cables used for the suspension by which the segments are attached to the pylons. At no time during the execution were they allowed to collide with the Balanced Cantilever Carriage. Last but not least, the planning of a balanced cantilever solution automatically involves high static requirements. As a result, constantly changing load conditions lead to varying stresses and deformations - these have to be taken into consideration regarding the dimensional accuracy of the concreting results.

The VARIOKIT solution for the cantilevered construction is a combination of heavy box girders for the load transfer and VARIOKIT standard components for forming formwork, working scaffolds and platforms. Due to the selected steel structure for the longitudinal direction of the PERI Balanced Cantilevered Carriage, up to 5.75 m long segments can be concreted.

For the Harpe Bru, a total of 4 Balanced Cantilever Carriages are in use with which 5.55 m long segments are constructed. In the process, the bottom slab with the side walls along with the outer ribs of the hollow box girders are concreted first. For this, compact DOMINO Panel Formwork Elements as well as project-specific VARIO GT 24 Formwork Elements have been used. The integrated formwork for the 1.30 m high transverse ribs is also based on the VARIO Girder Wall Formwork; spindling can take place very quickly and easily during striking. In a second concreting section for each segment, the carriage-

The flexible VARIOKIT cantilevered construction solution ensured rapid progress for the construction of the individual superstructure segments. In December 2015, the work was due to take place on the final gap closure.

way slab is then concreted.

The PERI formwork solution ensures exact, dimensionally accurate concreting results. The high flexibility of the system

facilitates fast adaptation of the formwork to match the geometric requirements. In addition, the independent moving procedure, in particular, results in optimized execution times thanks to the integrated hydraulics together with the fully hydraulicallyoperable aligning and adjusting. The PERI solution has thereby supported the construction

team in keeping the required workloads for each bridge segment as low as possible. This has also had a measurable impact on the construction time.

> The fact that the Balanced Cantilever Carriage can be combined with the PERI UP Modular Scaffolding has facilitated the realization of safe work spaces and access to all working areas. With a minimum of effort for the construction team, the scaffold could be connected with the VARIOKIT standard components using simple connecting

means to form safe working platforms and access points.

The balanced cantilever solution for the Harpe Bru bridge was developed in a close



The Harpe Bru bridge superstructure is being constructed using a total of 4 Balanced Cantilevered Carriages. It is the first extradosed bridge in Norway.

EXPANSION OF THE EUROPEAN ROUTE E6 IN NORWAY

The European Route 6 (E6) stretches over 3,140 km from the southern Swedish town of Trelleborg through to Norway, and then runs through almost all of the country to Finnmark. It is therefore an important north-south connection in Norway, connecting the country with the west coast of Sweden.

Currently, several projects for the expansion of the European Route are in planning or execution. This includes the route from Ostfold to the Swedish border at Svines being widened to form a 4-lane road. In addition, several new bridges have been planned including the Harpe Bru bridge at Sør-Fron in the Oppland province.

collaboration and partnership by PERI formwork engineers together with Porr work preparation experts. The comprehensive implementation plans, detailed designs and technical documentation ensure on-site formworking operations can be easily and efficiently carried out. With regard to the technical features of the Balanced Cantilever Carriage, the PERI solution has taken into account the customer's requirements with respect to a minimized workload. Last but not least, especially the high proportion of system components from the VARIOKIT Engineering Construction Kit as well as the high availability of materials in the PERI rental park ensure a high level of cost-effectiveness of the solution.

Source: PERI GmbH

Stowe Mountain Resort Grows with 238 HSL & 298 HSL Steel Erection

Raymond Chauvin started CCS Constructors, Inc. (CCS) in 1967 and specializes in steel erection and crane service in the northwest part of New England and into eastern New York. After serving in the Army Corps of Engineers and dealing with heavy equipment, he realized that there was a need for a crane service where he grew up. "We started a long time ago using Link-Belts and kept buying them ever since. Once you have a piece of equipment from a manufacturer that you can depend on, you're going to stay with them," he said.

After 46 years of operation Mr. Chauvin and CCS remain busy in New England lifting steel every season of the year. At the new Spruce Peak Adventure Center and Alpine Club buildings at Stowe Mountain Resort, CCS used 2 Link-Belt cranes to erect over 1,360 t of structural steel and place 250 concrete retaining wall panels. Cold weather was a factor for the

project, as winter temperatures plummet to -30°C. "Everything has to work harder on the crane – the pumps to any of the hydraulics – it takes more fuel to run the

machine when it's colder."

Raymond
Chauvin also
points out that
the cold weather
is not limited
to affecting fuel
consumption.
"It's also harder
on cables and
sheaves. It's
good to have
sealed antifriction bearings.
Many mornings

we exercise the cables to get any ice off of them, so they aren't so stiff. Ice can form on the boom tip after a day's work, if it snowed or rained the previous day and night. The ice has to be dislodged, so it doesn't fall onto anyone in the area within the boom tip and cables. Everything has



to be working properly and safely for us to begin," he added.

The Link-Belts cranes, a 226.8 t 298 HSL

Small Yet Powerful - New CX Multihog at IFAT

Models of the new Multihog CX range were recently exhibited on the IFAT exhibition held in Munich from May 30 to June 3. The smallest Multihogs to date were developed specifically for municipal services and expand the existing successful MH and MX tractor series.

Chassis widths of the CX series begin at 1150 mm, for easy operation in even the narrowest environments, and all models, each with European T2 tractor approval, are fitted with a 3 point linkage plate on the front, making it easy for customers to use their existing attachments.

In addition to the 2 core models, the CX 55 and CX 75 with 55 and 75 hp Tier 4 engines respectively, 2 further variations are also available: the longer chassis of the CX 55 L allows usage of larger rear attachments, e.g. substantial tanks or grass collectors. An increased carrying capacity of 4 t instead of 3.5 t is also available with the CX 75 HD model.

Thanks to the "Plug and Play" system, a Multihog CX tractor with a basic specification aimed at operating certain

attachments, can be upgraded to a more sophisticated specification at a later time – a cost effective and flexible solution for municipalities and local authorities, if further multifunctionality of this versatile equipment is required.

Other attachments were also exhibited on the stand – on the CX 75 a flail arm mower from McConnel was mounted on the front, while the CX 55 was kitted out with a rotary mower from GMR.

Originally designed for green area maintenance and weed removal, the compact CX models during test driving also performed exceptionally for other applications such as winter services and road repairs. The MX and MXC models were also exhibited with a combi snowplow and brush, a de-icer tank and a patch planer.

Multihog products could also be found on other exhibitors' stands at the exhibition: Bucher Municipal AG showed the CX 75 with winter attachments – a snowplow and rear-mounted salt spreader. On the Trilety stand, an MXC120 with a front-mounted sweeper drew plenty of



attention.

"Municipalities like the narrow design as well as the all-round capabilities of the compact machine," according to Multihog's managing director Jim McAdam. "We have already delivered the first CX models and our order book is filling up very quickly, proving the suitability of the size and multifunctionality of this compact machine we and look forward to continued success with this series."

Source: Multihog Ltd

and 136.1 t 238 HSL lifted and placed steel and concrete panels from the southwest corner of the jobsite, staying out of the way of existing ski lifts and ski slopes. The 2 cranes expedited the construction process by placing concrete wall panels around the entire structure, eliminating the need for pour-in-place concrete during tough weather conditions. The panels weigh up to 22.6 t each and are placed at a 15.24 m radius, creating a perimeter for the jobsite at the base of the ski slope.

Production for both cranes averages 40 to 50 pieces a day in order to hang about 3,000 pieces of steel. Structural steel beams weigh between 136 kg and 2,268 kg each. Steel roof trusses weigh 2,722 kg and are placed at the greatest radius in order to complete the framework of the building.

The \$68 million structure will have an exterior of structural steel light-gauge metal framing, along with high energy efficient glass. Composite insulated panels, with a



foam core sandwiched between layers of metal, wood or cement, along with vapor barrier and drainage mat comprise just a few of the elements intending to make the project green. Geothermal energy will be used to operate the mechanical systems for part of the new development. There are also plenty of valleys, gables and shed dormers with classic gables and timber frames, keeping an Alpine architecture concept.

Source: Link-Belt Construction Equipment Company





50 Years of IFAT, A Success Story

IFAT started out in 1966 with 147 exhibitors and 10,200 visitors and is continuing seamlessly today.

This year, around 138,000 visitors from over 170 countries came to Munich, Germany, for the anniversary edition of IFAT between May 30 and June 3, 2016.

"The feedback from all our participants was overwhelming. The further rise in participation figures is impressive proof of how for 50 years IFAT has been shaping the development of the environmental technology sector," says Stefan Rummel, managing director of Messe München.

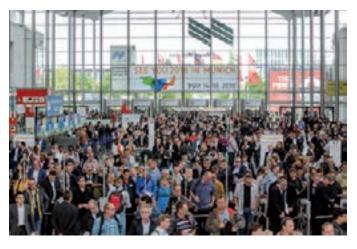
"The exceptional performance of IFAT is continuing in 2016. Excellent new contacts were forged for our companies, in particular in the international arena. Overall IFAT has been a tremendous success in its anniversary year," concurs Dr. Johannes F. Kirchhoff, chairman of the Advisory Board of IFAT and managing partner of Kirchhoff Ecotec.

That is an assessment shared by the ex-

hibitors. Because this year, again, one of the outstanding features of the World's Leading Trade Fair for Water, Sewage, Waste and Raw Materials Management was the high level of international participation. After Germany, the top 10 countries of origin among the visitors were: Austria, Italy,

Switzerland, China, the Czech Republic, the Netherlands, Spain, Poland, Denmark and Turkey. Strong growth on the visitor side was noted from Australia, China, Israel, Italy and Singapore. The overall proportion of visitors from outside Germany was 47%.

A total of 3,097 exhibitors coming from 59 countries, presented their innovations and new developments for the environ-



mental technology sector on 230,000 m² of exhibition space.

The next IFAT takes place from May 14 to 18, 2018 in Munich.

Source: Messe München GmbH

SnowEx® Tailgate Pro Spreaders Offer Improved Controls, Enhanced Functionality

The new SnowEx® Tailgate Pro spreaders feature more compact controls with fewer wires for enhanced functionality and simpler installation. Offering hopper capacities of 0.16 m³ and 0.30 m³, respectively, the SP-575X and SP-1075X single-stage spreaders can apply salt and de-icing materials to roads, driveways, parking lots and recreational paths.

Allowing material spread width adjustment up to 12 m, the new enhanced spreader control is more compact compared with previous models. A redesigned electrical system, using fewer wires, makes the control less obtrusive in the cab and gives users more flexibility when mounting. Featuring intuitive LED indicator lights and a digital diagnostic display, the control also has auxiliary functionality that allows any accessories plugged into the spreader to be easily controlled from the cab.

The SP-575X comes with a standard 50.8 mm receiver hitch. Meanwhile, a newly enhanced universal pivot mount – available as an option for the SP-1075X

- allows the spreader to swing away from the tailgate for convenient access to the truck bed. The pivot mount's ability to adjust for varying heights, widths and styles allows it to cater to a wide range of

pickup trucks, SUVs, UTVs and tractors.

Located in an enclosure on the spreader, the FLEET FLEX electrical system provides power to all accessories and allows for complete fleet interchangeability between other single-stage FLEET FLEX system tailgate spreaders.

The Tailgate Pro features a heavyduty modular steel frame protected by a two-stage powder coat paint system that provides a maintenance-free finish. Constructed of high-density, lightweight polyethylene, the hopper has a low-profile design that keeps the vehicle's rear window unobstructed and allows for increased operator visibility and safety.

Each model features a 76.2 mm, vertical high-flow auger that produces consistent material flow. With no belts, pulleys or chains, downtime is minimized. The direct-drive system is mounted in a patented sealed drive enclosure and is built to last with a revolutionary, maximum-torque transmission.



Pettibone Hits Peak Lift Height with Extendo 1157B Telehandler

The new Pettibone 1157B is the highest reaching telehandler in the company's Extendo product line. Featuring industry-leading hydraulics and engineered for efficient performance, the 1157B offers excellent lift capacity for a wide range of material handling jobs.

Delivering a maximum load capacity of 5,000 kg, the Extendo 1157B provides forward reach up to 12.8 m, and an outstanding maximum lift height of 17.4 m. Single joystick, pilot-operated controls allow for smooth control of all boom and auxiliary hydraulics. For operation in tight areas, the 1157B offers 4-wheel, 2-wheel and crab steering modes and has a turning radius of just 3.8 m. The unit is exceptionally powerful, yet compact enough to fit under a 2.4 m doorway.

The 1157B is powered by a fuel-efficient, 117 hp Cummins QSF 3.8 Tier 4 final turbodiesel engine, featuring electronic control and protection with SCR aftertreatment. A Parker IQAN-MD3 display provides instant engine and aftertreatment diagnostics. The machine's fully modulated Carraro Powershift transmission offers 4 speeds, forward and reverse. Maximum

travel speed for the 1157B is 32 km/h.

The rugged design of the Extendo features 2 wide-stance, heavy-duty lift cylinders with innovative automatic fork and load leveling that eliminates the need for slave cylinders. To further improve load stability, the 1157B offers 24° of frame sway (12° left and right of center) and is equipped with a rear axle stabilization system. The unit is also outfitted with standard foam-filled tires.

The operator cab is built to provide outstanding visibility at any boom position. Engineered with comfort in mind, the



Extendo also comes with an adjustable suspension seat and adjustable right-side armrest. A full set of gauges provide instant machine status.

The 1157B telescopic handler comes with a variety of standard fixed and side-tilt carriages from 120 to 180 cm, and several optional attachments are available – including utility buckets and pallet, lumber and block forks. Other optional equipment includes light packages, an enclosed, climate-controlled cab, and several others.

Source: Pettibone/Traverse Lift, LLC

New Sectional Snow Pushers for CASE Loaders and Backhoes

Other standard features include a top screen and fitted lid for the hopper. To further boost material flow, an optional vibrator kit can be easily connected to the standard control without running additional wires or switches.

SnowEx Snow and Ice Control Equipment is proud to be a part of Douglas Dynamics, North America's premier manufacturer of vehicle attachments and equipment and home to the most trusted brands in the industry. For more than 65 years, the Company has been innovating products that not only enable people to perform their jobs more efficiently and effectively, but also enable businesses to increase profitability.

Source: SnowEx Snow and Ice Control Equipment



CASE Construction
Equipment has introduced
a new line of 6 heavy- and
light-duty sectional snow
pushers compatible with
both current and older
model wheel loaders,
skid steers, compact track
loaders and backhoes.
The independent moldboard sections move
independently, allowing
each section to shift up
and down in response

to uneven pavement or obstacles. The light-duty models, designed for compact equipment and backhoes, feature pushers up to 396 cm wide. The heavy-duty line offers pushers up to 518 cm wide for full-sized wheel loaders.

The new CASE pushers are also compatible with competitive equipment and allow a snow removal contractor to standardize on a single type/style of pusher across their fleet.



Each pusher features a Hardox 450 steel cutting edge that scrapes cleanly down the pavement and, if obstacles are encountered, only a single section of the pusher is lifted off the ground. This ensures that the other sections of the pusher remain flush with the ground and more snow is removed on the first pass than traditional snow pushers and snowplows.

Source: CNH Industrial

Rigid Steel Frame Enables Roof-Mounted Solar Panels

Legacy Building Solutions is proud to announce the Solar Ship Brantford off-grid hangar, a joint venture with Canadian Energy and Solar Ship Inc., has been awarded the "Game Changer Project of the Year" by Canadian Solar Industries Association (CanSIA). With the award for Solar PV Project, CanSIA recognizes the hangar for using a reliable and cost-effective system that advances the future of building-integrated distributed generation.

Located in Brantford, Ontario, the 3,770 m² hangar uses energy generated by photovoltaic cells on the roof and runs completely independently of the traditional power grid. The hangar is designed to accommodate the size and shape of the aircraft, which have an anticipated wingspan of up to 50 m.

"All Legacy buildings have some sustainability features," said Jim Kumpula, general manager of Legacy Building Solutions of Canada. "Working with Solar Ship forced us to consider how every aspect of the building can be greener."

The hangar, engineered, manufactured and installed by Legacy, is a fabric struc-

ture on a rigid steel frame. The strength of the frame combined with the lightweight fabric enable the 53.6 m by 70.4 m building to be built 18.3 m high at the eaves, with an interior clearance of 25 m.

The sturdy steel frame supports the weight of the photovoltaic cells as well as 1.18 kPa roof rain-on-

snow load. The roof frames run parallel to the cells, preventing uplift in high winds and contributing to optimal operation of the solar panels.

The energy-efficient design of the hangar also includes a passive ventilation

system and natural light to reduce the power needed to run the hangar, which is used to manufacture and store Solar Ship's



solar-powered aircraft.

Lewis Reford, a partner at Solar Ship, said, "Legacy Building Solutions has given Solar Ship more than just a state-of-the-art hangar and assembly building. Through our close collaboration, their design







incorporates a self-reliant photovoltaic power package that sits above the fabric roof, allowing our building operations to be entirely off-grid. In addition, Legacy's foundation design allowed us to reuse an existing concrete pad, saving us time and money during construction. These innovations were part of our top-level requirements, and delivering on them really sets Legacy apart from the traditional building segment."

CanSIA is a national trade association that represents the interest of the Canadian solar energy industry. The Solar PV Project of the Year is awarded to the Institutional, Commercial or Industrial (ICI) solar PV project that, either through high visibility, meaningful stakeholder engagement or innovative features, has helped the solar PV industry become mainstream.

Source: Legacy Building Solutions

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Parry Sound Area Municipal Airport Keeps Businesses Accessible with a REIST Snow Blower



In a small community like Parry Sound, Ontario, the airport is more than just a transportation terminal. As general manager of Parry Sound Area Municipal Airport, it is Neil Pirie's job to keep the facility "open for business" for a wide range of activities and enterprises. As well

as providing aviation service for cottagers and business flyers, Mr. Pirie is also accountable for serving the business park that also shares the site and for maintaining the region's link to vital emergency services.

In winter, it can be

a daunting task. Located on the eastern shore of Georgian Bay, Parry Sound is in the path of frequent "lake effect" snow squalls – localized blizzards that form suddenly over Lake Huron and quickly blanket the area in heavy snow.

"It's not unheard of for us to come in here and have to move a foot and a half (45 cm) of snow," reports Neil Pirie. "The squalls can park right on top of us for 10 days straight, leaving us with another 20 cm of snow every day. With the equivalent of 6.5 ha of roadways and parking areas that need to be cleared, all we can do is get out and peel off the layers as quickly as we can, sometimes in zero visibility."

When the snow hits, Mr. Pirie's day will typically start at 5:30 am to clear parking areas and access roads for the Parry Sound Airport Business Park so that those businesses can start work by 7:00. Next, the roads and areas around the aviation shops are cleared by 8:00. Then, they move to the lanes and parking for the terminal itself, including the café and fuel pad. Finally, the runway and taxi areas for the aircraft.

"It's not just the air side we have to worry about. The companies on the field

here have about 70 employees in the Business Park that have to keep working. This means that all aspects of the airport need to be functional."

Until 2 years ago, clearing the snow here required a crew of 3 operating a street plow, a ½ ton truck and a Ford 8700 tractor

freeze over. You're never done. You have to keep going to try and keep up. We really needed a blower that could get in there and chew through everything and blow it clear away!"

"Cleaning an airport is not like doing a parking lot," adds Mr. Pirie. "You can't pile



fitted with an 2.4 m snow blower. Then Mr. Pirie and members of the Parry Sound Airport Commission brought in a new system in time for Christmas. Two new power units came into the fleet, both New Holland TV 145 tractors. One tractor was equipped with a 4.6 m HLA SnowWing and

the other with a 3.0 m 6120RH double-auger snow blower from REIST Industries.

"When the committee from the Airport Commission was researching the equipment, we knew we needed a more powerful

tractor, at least 130 hp, and we needed a more robust snow blower," says Neil Pirie. "When a weather event moves in on you, you have to be able to move through all kinds of ice chunks and heavy snowbanks that have been piled up. In some cases, the windrows have to sit a while and they can

the snow just anywhere. In our situation, you can't have high windrows and snow banks. So, you have to blow the snow off. Some of the aircraft come in with wings just 120 cm off the ground.

"We have a 22.8 m wide, 1220 m long runway. We have to move the snow to



the lights first, and then blow it over the lights and out of the way," he says. "The REIST blower is the most important piece of equipment at this airport, or we would have nowhere to put the snow."

Neil Pirie is more than satisfied with the performance of the new fleet. Side

chutes on the snow blower improve its efficiency when it is running into the wind and increases its throwing distance. The bi-directional articulated tractors allow the maneuverability to run tight passes, with virtually no turning radius.

"It's phenomenal! The new equipment has reduced, on average, our removal time by at least 50%, and we're doing it with just 2 crew," Mr. Pirie reports that timing is everything and he is grateful to the Commission for their support in acquiring the new equipment. "Last winter was exceptional. For the complete season, we received between 5.5 to 6 m of snow and during the months of November and December, the average on a monthly basis was over 100 cm!"

Neil Pirie also found the durability he was looking for in the REIST snow blower.

"As soon as I got a look at the REIST blower, it looked like it was built for our area," he says. "Now, we've had a full year with it, problem-free. As is the case with any snow clearing equipment, we keep an eye on the cutting edge, because we have to clean right down to the asphalt; we can't leave any ice on the runway. But we haven't yet had to replace any parts. We have called the factory a few times just for information. Their customer service is great; whenever I've called, I talk to Brian Reist himself. He's always full of advice and very helpful."

By keeping the airport property clear of snow faster, Neil Pirie is meeting his goal of keeping the complete facility "open for business". And the most important business, according to him, is emergency services.

"Often when we get a large snow event, there are power outages in the region. So being able to get the Hydro One helicopters fueled up and off the ground right away, to restore the power, is huge. And getting air ambulances in... I don't know what more you have to say. If they can't get in, it's critical," concludes Mr. Pirie.

Source: REIST Industries

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Philippi-Hagenbuch Introduces Material Spreader for Applications from Mining to Landfills

Philippi-Hagenbuch announces the release of its new Material Spreader Body, designed primarily for mining but with benefits in a variety of applications, including construction, aggregates, quarries and landfills. The Material Spreader provides a safe and efficient solution for mine haul road maintenance. It improves the safety

and traction of icy haul roads in winter by applying road grit. During spring thaw, the Material Spreader easily tackles deteriorating road areas by spreading repair material and building up areas.

"We receive multiple requests every year for a sanding body that can apply grit to haul roads,"

said Josh Swank, Philippi-Hagenbuch vice president of sales. "When we started designing the material spreading system, we wanted to ensure that it met the same criteria as all of our products. This spreader, like all PHIL products, is robustly built to withstand the harshest worksite conditions, simple to operate, and designed to maximize efficiency and achieve the truck's true hauling capacity."

The heart of the system is a patented PHIL Rear-Eject Body coupled with the new Material Spreader attachment. The Material Spreader easily spreads road grit, sand or other material ranging in size from very fine to more than 5 cm. Operators can easily adjust the material spreading width from about 4.5 m to more than 18 m. The haul truck operator controls the material spreading rate and width from the truck's cab.

An optional top-loading Grizzly Screen controls the maximum size of the material being spread. The ejector blade on the proven PHIL Rear-Eject Body moves material to the rear of the body and into a Cross Auger Channel. The auger gathers material to the center of the spreader and then discharges it onto a set of Material

Spinners for spreading.

The PHIL Material Spreader Body provides companies with a fast return on investment since it eliminates the need to purchase a dedicated piece of sanding equipment. It adapts to year-round use as the spreader, adds traction to icy roads during the winter and builds up and



maintains haul roads in the spring and fall. During summer, the Rear-Eject Body hauls and spreads material. A crew can easily install or remove the Material Spreader attachment from the Rear-Eject Body within about 2 hours.

PHIL builds the Material Spreader, like all its products, to be efficient, easy to operate and withstand the test of time. The system is made with Hardox 450 steel and designed for maximum productivity. PHIL manufactures all components out of steel designed specifically for the mining industry, including the Rear-Eject Body, which is built to withstand years of use with little more than typical preventative maintenance. PHIL designed the system with few moving parts, which also contributes to less required maintenance.

"We are always looking for ways to make our customers' lives and jobs safer, more productive and more efficient," said Josh Swank. "This is the first in a series of PHIL Ejector Body attachments that will help us expand the flexibility of our Rear-Eject Body technology while achieving our goal of making mines more productive, profitable and safe."

Source: Philippi-Hagenbuch Inc.

TrucBrush Receive SBANE New England Innovation Award

dent Debora Babin Katz, who also chairs

TrucBrush Corporation is proud to announce its recent New England Innovation Award, sponsored by the Smaller Business

Association of New England (SBANE), for its patented mobile device Truc-Brush® and service methodology to clear accumulated snow off truck, trailer and bus rooftops prior to transit. The polypropylene-bristled device quickly connects



the national Snow & Ice Management Association's Snow Business editorial opment and have clearly demonstrated the validity of their business. TrucBrush Corporation was one of 188 nominees who



to and is powered by a front-end loader, making it a fast, effective and safe method which is capable of being outsourced to a snow service vendor.

"We are proud to be among other New England innovators to win this award and we appreciate HarborOne Bank for nominating us," said TrucBrush vice presiadvisory committee and is board chair of the Women In Trucking Foundation.

TrucBrush Corporation joins the SBANE Circle of Excellence, class of 2016, as the winner of the Robert Crowley "Rising Star" Innovation Award, named after SBANE's former chairman. It is awarded to companies who are in the early stage of devel-

were narrowed down to 50 semi-finalists, and then in a second judging to 20 finalists who presented to 66 judges during phase 2 of the competition. Of the 20 finalists, 4 winners were chosen in the "Profit" category, 2 in the "Non-Profit" category and 2 as "Rising Stars".

TrucBrush represents an opportunity for

New Trackless Series 7 Municipal Tractor

Trackless Vehicles Ltd. recently introduced their new Series 7 municipal tractor. Over the last 45 years there have been hundreds of changes and improvements which have increased equipment performance, operator comfort and safety features while reducing fuel costs, noise levels and downtime. The MT7 now takes the Canadian manufacturer to a whole new level.

The new MT7 is being well received by all customers who have had the opportunity to test drive, check out all of the design enhancements and learn how all of the value added features benefit and reduce cost for their various departments.

A 74 hp John Deere Tier 4 final diesel engine powers the MT7. Rather than a smaller 2.8 to 3.3 I engine, Trackless chose a larger 4.5 I displacement engine for higher torque and longevity. Although the horsepower is less than the prior model MT6, it is very close to the MT3, MT4 and early model MT5s which were produced for many years and cleared snow from sidewalks, loaded trucks with a snow blowers and powered large mowing equipment.

A new joystick design for the MT7 automatically programs itself for whatever attachment is being operated by the tractor. It can now move both mower wings or folding plow wings at the same time. Forward, neutral and reverse is achieved by a simple flick of a switch on the joystick. The

design and function of the new joystick is both ergonomic and extremely easy to learn and operate.

The new digital dash illustrates all tractor and engine functions, switches to a backup camera screen when in reverse, allows access for maintenance personal to retrieve information and displays all on board self diagnostics. The self-diagnostic feature functions continuously and advises what error codes along with what the ECU



has diagnosed to be the cause.

Hydrostatic lock, a type of cruise control, is now standard equipment. An Electric locking front differential is still optional. A new feature that customers are very impressed with is the anti-bounce ride control. It eliminates the bouncing after hitting a bump or pothole in the road.

Source: Trackless Vehicles Ltd.

many snow service contractors to expand their businesses. "As we continue to push innovation within the snow industry, it has been products like TrucBrush that has helped our organization differentiate itself from others," said TrucBrush customer Mark J. Aquilino, president of Outdoor Pride of New Hampshire. "Last year, we were awarded a large airport freight facility snow contract because of our introduction of Trucbrush services. TrucBrush has allowed us the opportunity to gain new clients and offer a new snow service, and we look forward to purchasing more TrucBrush units," he said.

Former winners of the NE Innovation Awards come from varying fields and past winners include notable companies such as Ben & Jerry's, Direct Tire, Genzyme, Nantucket Nectars, Staples and Zipcar. "Innovation is at the heart of economic prosperity and SBANE continues to recognize those companies and organizations

that have transformed their innovative ideas into a product or service that delivers proven value to customers," said SBANE's NE Innovation **Awards** Committee

chairman, Todd Faber, president of The Faber Group.

TrucBrush® is manufactured in the U.S.

From I. to r.: SBANE former chairman, Robert Crowley, honors this year SBANE New England Innovation Robert Crowley "Rising Star" award to TrucBrush vice president Debora Babin Katz, and president Jim Burns

and sold throughout North America. Source: TrucBrush Corporation

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New Tough Forged Steel Tire Chain Pliers from Kinedyne

Kinedyne Canada Limited recently announced the introduction of its new Tire Chain Pliers, part number 80122, to the industry.

The new device is designed to make the job of repairing, replacing and adding cross chains easier and simpler. Kinedyne's new Tire Chain Pliers have been engineered exclusively for cold weather usage and have features that make it both durable and functional in harsh winter environments.

Ergonomically designed handgrips are made of lightweight, nontoxic thermo plasticized rubber (TPR), that is resistant to weather, ozone and many chemicals. The TPR material

is durable and is easy to grip, even with gloves on, because it is formulated to

remain flexible, even at low temperatures.

The pliers weigh only 4 kg and are constructed of rugged forged steel, coated with a thick layer of corrosion-resistant paint. The device measures 83 cm in length and its long arms provide ample leverage to bend cold metal. The

design enables the user to easily open chain connectors with the pliers' rear jaw and to close them again with its front jaw.

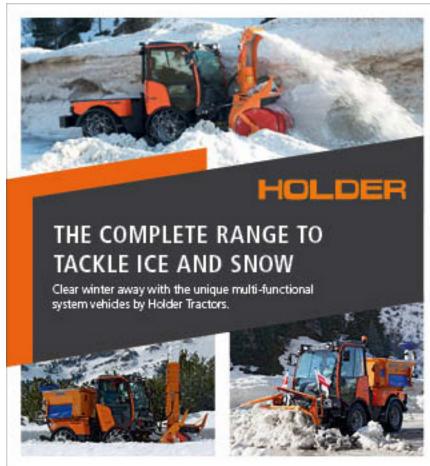
The pliers are great for tire chain repairs and for adding cross chains. The pliers are easy to store and require very little maintenance.

Founded in 1968, Kinedyne LLC is a world-leading manufacturer and distributor

of cargo control products for the transportation industry. The Company serves a broad range of users, which include OEMs, fleets and independent owner-operators, across a wide variety of markets, including heavy-duty trucking, military, agriculture, and automotive.

Source: Kinedyne Canada Limited





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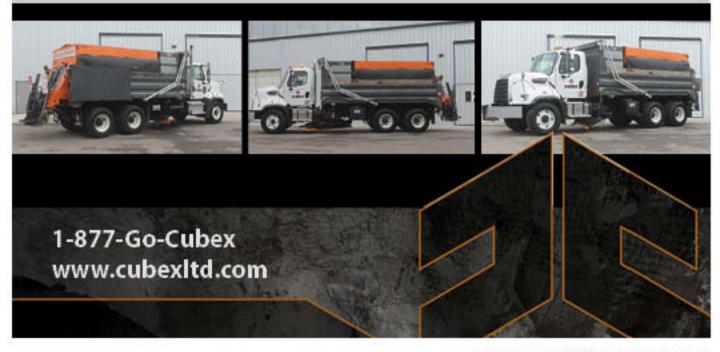
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Smooth Rides Ahead in Montreal

The citizens of Montreal, Quebec, and its surrounding boroughs will soon be seeing more and more self-propelled pothole patchers from SuperiorRoads on their streets, and fewer and fewer potholes.

Last year, Montreal-based road maintenance company Les Enterprises Myrroy purchased 6 SuperiorRoads SR 5000 pothole patchers and began work on the streets of Montreal. Before awarding new contracts, the City undertook a comprehensive study to determine the best method of repairing their roads, including traditional methods such as spray patchers. After a thorough analysis, all 10 available road maintenance contracts were awarded to Myrroy to maintain the major streets and roads of Montreal and its surrounding boroughs with the SuperiorRoads SR 5000.

This Canadian-made product from SuperiorRoads is the only one-person operated pothole repair machine that uses standard asphalt mixes to produce compacted, long-lasting patches. The operator stays



safely in the unit's cab while repairing the average pothole in less than 2 minutes. The SR 5000 can be used in nearly all weather conditions, including rain and subzero temperatures – something that cannot be done using other methods.

The SuperiorRoads SR 5000 will patrol the major city streets and repair potholes when they first appear. By keeping the roads in good condition, the city will be able to delay resurfacing those roads for years. That means a potential savings of millions of dollars for the city. It also means fewer repair costs for the city's drivers as damage to their vehicles from

potholes becomes a thing of the past.

Even more importantly, this unit will keep city workers safely out of heavy traffic. Traditional repair methods meant workers had to be out on the roads with little protection against the traffic. With the SuperiorRoads SR 5000, the repairs are carried out by one person who stays safely inside the unit.

SuperiorRoads is also currently demonstrating the newest version of their Canadian-made sweepers – the 4.6 m³ capacity S3 – to the province's largest contracting groups in the Montreal area.

Source: SuperiorRoads Solutions

Road Maintenance Made Easy



Extend the life of your roads with the Python 5000 Pothole Patcher

- Save money and add years to the life of your roads.
- Long-lasting, compacted patches with regular hot or cold asphalt mixes in about two minutes.
- Continuous repairs to long cracks and joins in the road.
- All-weather operation.
- · Operator stays in the safety and comfort of the cab.

Watch for an exciting announcement from SuperiorRoads on August 29.

Sweepers built with the operator in mind -Easy to operate and easy to maintain

- \$3 The most powerful sweeper in the industry. Handles the toughest sweeping jobs - even millings after road repairs.
- S2 The contractor's choice. Powerful, maneuverable and easy to operate.





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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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MLC650 Keeps Montreal Bridge Replacement On Track

Two Manitowoc MLC650s are working on a project to replace the Champlain Bridge, which spans the Saint Lawrence River in Montreal, Quebec. Signature on the Saint Lawrence Construction (SSLC) is the engineering consortium assigned to the task. The capacity and reduced ground preparation made possible by the MLC650's VPC-MAX attachment – as well as the ease of use of its Crane Control System (CCS) – are helping the team stay on schedule.

Andre Mylocopos, Approaches manager for SSLC, said the company chose the 650 t MLC650 because of the Variable Position Counterweight's (VPC) ability to enable high-capacity lifts with minimal adjustments. The crane only needs to be setup once and its counterweight is adjusted automatically based on each lift. The optional VPC-MAX attachment raises the crane's capacity to 650 t using fewer components and assembly steps than traditional attachments.

"The MLC650 has better chart than other cranes in its class for the work envelope



defined on this project," he said. "We are able to perform most lifts at less than 90% capacity, so this gives us a comfortable safety margin. The VPC-MAX is instrumental in giving us that headroom without having to drag a wagon behind the crane. We actually eliminated a number of cranes from consideration because they couldn't meet our needs without a wagon, which is a major constraint due to the limited work area. The MLC650s were ready to go upon

The cranes are currently tasked with lifting 220 USt steel girders for the bridge's east approach. The dual MLC650s will then be used to lift 88 USt precast concrete segments to construct the cable-stay

erection."

bridge pylon, followed by a tandem lift to erect the 440 USt lower cross beam. After the completion of the cross beam, the MLC650s will be used to construct temporary support towers, and to erect 220 USt pier caps and additional girders.

The MLC650 features the CCS system which maintains a standardized

operating platform across all of Manito-woc's newer crane models. Yan Duguay, a crane operator for SSLC, said that the company's operators found the MLC650 easy to use thanks to the intuitive controls made possible by CCS.

"Our operators are enjoying the MLC650's controls," he explained.
"Compared to other cranes I've used, the computer system in the MLC650 seems easier to operate. That simplicity is crucial on a jobsite where time and safety are utmost concerns. Since we are only using



Manitowoc cranes for the bridge replacement, the uniformity of easy-to-use controls only makes the jobsite more productive."

As with all Manitowoc

cranes, the MLC650 also performs well in low temperatures, making it particularly well-suited for tough jobs in Canada.

"In Canada, we need cranes that can stand up to the elements. Manitowoc cranes perform well in extremely challenging weather conditions, which makes them ideal for the Canadian climate," Mr. Mylocopos explained. "When you combine those factors with intuitive controls, you can see how Manitowoc cranes are helping SSLC maintain uniformity and productivity on the job site. We're on track to complete the bridge by December of 2018 and we're counting on the MLC650 and the rest of our Manitowoc fleet to be a big part of that success."



The MLC650s are not the only Manitowoc cranes aiding SSLC in its bridge building efforts. The construction team's fleet also includes a 272 t Manitowoc 2250, four 400 t Manitowoc 16000s, two 1,300 t ringer-enabled Manitowoc M250s, seven 135 t Grove RT9150Es and two 120 t Grove RT9130E-2s. The M250s, each equipped with a M-1200 ringer attachment, will be installed on 2,787 m² barges to lift pier caps and girders on the water. The Grove cranes will perform smaller tasks such as general loading and unloading, support, access, and erecting smaller structures and components.

The Champlain Bridge connects one of North America's busiest roadways, with more than 50 million cars, buses and trucks crossing its 3,400 m span each year. The 42-month project to replace the bridge began in June of 2015 and is scheduled for completion in December of 2018. The replacement of the Champlain Bridge is currently one of the largest projects to expand infrastructure in North America.

SSLC was chosen by the Canadian government to carry out the design, construction, financing, operations, maintenance and rehabilitation of the New Champlain Bridge Corridor Project in April of 2015. SSLC consists of Montreal, Quebec-based SNC; Toronto, Ontario-based Dragados Canada; Richmond, British Columbia-based Flatiron Constructors Canada; and L'Ancienne-Lorette, Quebec-based EBC. The initiative is being conducted under a public-private partnership agreement with the government of Canada.

SSLC procured the MLC650s from Strongco.

Source: The Manitowoc Company, Inc.

Continental Presents High-Performance Port Products at TOC Europe in Hamburg

From tires to tire management systems, Continental Commercial Specialty Tires (CST) presented selected products from its extensive port tire range at TOC Europe, held for the 40th time, last June, in Hamburg, Germany.

"Port logistics is constantly changing. Digitalization, connectivity, and the requirements for minimal downtimes and reduced costs are challenges that our customers have to overcome," says Julian Alexander, product line manager Material Handling at Continental CST, about Continental's appearance at the upcoming trade fair. "We are constantly developing our product range in order to be able to offer the best solutions for their individual needs from a

single source – and for every port vehicle."

Continental CST tires, which are used in day-to-day port operations, feature impressive safety and optimized performance, have positive effects on the environment, and offer significant potential to reduce costs. This also

applies for the Continental TractorMaster and ContainerMaster.

The high-performance pneumatic TractorMaster tire is now available in version 280/75 R 22.5 in addition to the existing tire size 310/80 R 22.5. The pneumatic tire was specially developed for use on tractors and trailer applications. It offers very good traction, a high load-bearing capacity, and very high mileage. The closed shoulder and the hard, wear-resistant compound of the tire provide even wear, low abrasion, and high resistance to damage. The tire is equipped with Continental's patented visual align-

mburg

ment indicator VAI which helps identify incorrect wheel alignment and suspension settings without complex electronic measurements, simplifying maintenance and reducing costs.



With the extremely robust Container-Master, Continental is also presenting a V.ply tire, which is applicable for reach stackers, empty container handlers, and heavy-duty forklift trucks. The V.ply design is based on racing tire technology and combines the benefits of diagonal and radial tires. V.ply tires feature extremely strong sidewalls, with a carcass consisting of up to 20 layers of textile cord, embedded in 3 separate wire beads. The textile layers of the innovative woven cord are arranged at specially designed angles in a V-pattern. Thanks to this innovative technology, the

ContainerMaster offers a high resistance to damage, a long service life, and low rolling resistance.

EFFICIENT FLEET MANAGEMENT THANKS TO INNOVATIVE TIRE MANAGEMENT SYSTEM

The ContiFlexBox tire management system enables drivers and fleet managers to manage their fleets in a safe, efficient, and environmentally-friendly way. It will be used in combination with the proven ContiPressureCheck™ tire pressure monitoring system, which enables automatic collection of data on tire pressure and temperature via sensors inside the tires. The information is shown on the display in the driver's cab. The ContiFlexBox will enable the collection, provision, and transfer of tire-related data to a central server via Wi-Fi or GSM for analysis and processing. The data will be transferred to mobile end devices as well as to the display in the driver's cabin. The ContiFlexBox technology will first be available for port applications from 2017.

Source: Continental Commercial Vehicle Tires



reaches more heavy machinery and specialized equipment users than any other trade magazine in Canada.

The Media Kit is available on InfraStructures' website at www.infrastructures.com



Taking Underground Work to a New Level

Utility contractor Con-Elco Ltd. is on a mission for continuous improvement and efficiency. And the company is using Hitachi excavators to take underground work to a new level of quality.

Established in 1978 under the Con-Drain Group of Companies, Con-Elco is run by Fiore Melatti and his sons, Nick and Attilio.







in 1991, and of Grimsby Construction this

companies, offers the total package when

new utilities and services for residential

developments - from underground hydro

and gas to fiber optics, cable, telecommu-

it comes to upgrading and installing

nication services and lighting.

past year. Today Con-Elco, with its affiliated



Con-Elco's fleet includes about 21 Hitachi excavators ranging from the ZX135 to the ZX210 size. Most recently, five ZX210LC-5 excavators were added to the fleet in August 2015. However, the company didn't always use tracked excavators for its work.

"We used rubber tire backhoes like most companies, but my father's always been someone that's looked at doing things better and being more efficient," said Nick Melatti. "We began looking at Hitachi equipment about 10 years ago."

"We started with the Hitachi 160," added Fiore Melatti. "I did a little investigating

> with asking other people, and they said it was a good machine. We tried it, and it worked for us. We saw an increase in production using the tracked machines."

Brian Machado, a Con-Elco superintendent, sees the Hitachi excavators at work

firsthand in the many projects Con-Elco takes on. The work being done on a residential development with 372 lots (in one phase) in Brampton, Ontario, is just one example.

"We install about 200 m of utilities every day on a 9-hour shift," he said. "The

"We started with one machine. Over the years we grew and we keep growing," said Mr. Fiore.

Part of that growth involved adapting to market needs with the acquisition of Fellmore Electric, which specializes in roadway and parking lot lighting systems,

AEM and MSHA Issue "Distracted Driving" Safety Alert

"Turn off your cell phone while operating off-road equipment" is the key message from the Association of Equipment Manufacturers (AEM) and the Mine Safety and Health Administration (MSHA) in a new jointly developed safety alert that emphasizes the hazards of distracted driving while on the worksite.

The alert is the latest project from the AEM/MSHA Alliance, which focuses on best practices to minimize risks in equipment operation and maintenance.

"We know in today's connected world that it's more important than ever to remind workers to focus on the job and be alert and aware and mindful of their environment and safety," stated Mike Pankonin, AEM senior director of technical and safety services.

The alert cites data on cell phone use in the automotive industry "that can be translated into the operation of off-road equipment," including:

- The risks of using a cell phone while operating mobile equipment can be up to 6 times worse than the risks of operating

mobile equipment while intoxicated.

- Writing or reading a text message takes your eyes off the road for an average of 5 seconds and at 90 km/h, that is like

driving the length of a football field blindfolded.

"Cell phone usage on the job is a dangerous distraction and can lead to injury or death. Using a cell phone while operating mobile equipment takes your eyes off the

road, your hands off the wheel, and your mind off your task," stated Joseph A. Main, assistant secretary of labor for mine safety and health.

"Through our alliance with the Association of Equipment Manufacturers, MSHA is working to foster safer mining workplaces by, among other things, providing industry with vital information emphasizing the safe

use and operation of mobile and powered haulage equipment. Powered haulage is the leading category of fatalities in metal and nonmetal mining. Over the past 5

> years, there have been 29 fatalities in powered haulage. Distractions caused by cell phone use greatly increase the risk. No call or text message is worth taking that chance."

AEM supports safety aware-

ness year-round by offering an extensive array of safety products, including safety manuals and videos, with major equipment types covering aerial, agriculture, compact/ portable, earthmoving, forestry, lifting, road paving and utility excavation applications.

Source: Association of Equipment Manufacturers (AEM)



Hitachi excavators are powerful and faster than other machines."

Con-Elco's sites also showcase the versatility of the excavators, such as a ZX160LC-5 trenching, backfilling and using its quick coupler to switch out buckets.

"I've operated other brands before, and Hitachi has come a long way," said Con-Elco operator Jamie Talbot. "They're comfortable and fast."

EVOLVING WITH THE INDUSTRY

"Con-Elco has experienced a changing industry over the past 38 years," said Mr. Attilio. "One of the reasons the company looked to Hitachi was to stay ahead of the curve.

"As things evolved and the industry was changing, we wanted to use manufacturers that were leading-edge as far as size of machine and ability for digging in situations we were using it for," he said. "Hitachi has been a good fit for us."

As a result, the company's fleet has



tackled changing workloads and timelines as well.

"Typically we should be doing a lot more work in the summer, but we tend to do a lot more work in the wintertime now," said Nick Melatti. "And we're finding Hitachi's reliability in the cold weather and the ability for the machine to break out the frost seems to be a little bit higher than the competitors out there. We're also finding that the guys running the machines tend to gear themselves to liking the Hitachi more

as far as ease of use and reliability."

Over the years, Hitachi equipment has become a competitive differentiator for Con-Elco and an extension of its brand.

"We're a company that's been around a long time, and we want our customers to know that we have good equipment and that we are reliable," said Nick Melatti. "Because we're working with a lot of the utilities out there, there's a safety aspect of it."

Source: Hitachi Construction Machinery





The Challenge: A Disconnected Service Network

Before implementing Geotab telematics about 3 years ago, Toromont CAT had not used this type of technology for the dealership's service trucks. Appointed with the task of seeing if telematics would

help the company improve routing service calls, Dave Dyer, fleet manager at Toromont CAT, needed to find a telematics solution that fit the company's needs for accurate, real-time data. Knowing where the technicians are in relation to the service calls would help to reduce customer wait time and minimize

" Our trucks were crisscrossing each other. With Geotab, I was able to show how many times we were crossing into each other's territory – That is fuel we don't need to burn. So, it reared its ugly head just by watching

where the trucks were going.' - Dave Dyer, Fleet Manager

18%

rising that year by 22%.

Through this improved routing, according

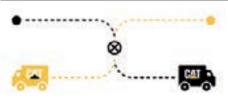
significantly on fuel. For example, he says

about 18% while the company's fuel expenditures dropped 4%, despite the cost of fuel

that after the first year of having Geotab,

Toromont CAT increased its fleet size by

to Dyer, the branches have been saving



the miles driven to get to each jobsite.

Mr. Dyer is the first fleet manager at Toromont CAT and has been in the position for 4 years. One of the reasons the company created the position is because

their fleet costs and challenges were escalating — from needing to improve maintenance management and routing, to increasing billing transparency with customers.

To address these challenges, one of Dave Dyer's first steps as fleet manager was to the add telematics to fleet and get the surrounding individually operated CAT dealerships to use it as well. But in addition to addressing the challenges the company knew it

already faced, adding telematics shed light on other efficiencies the company wanted to tackle, such as safety management disputing accidents, as well as creating a more fuel-efficient driver.

SAVING ON MILES: PULLING DISPATCH TOGETHER FOR ROUTING EFFICIENCIES

After just 3 months of using Geotab, Mr. Dyer put his case together for how the dealerships could work together to

improve routing across the branches.

"We basically said, let's dispatch together instead of individually, so now the trucks are moving shorter distances," he says. "We were all so focused on our own branches, but now we're saying you need to care about the other branches because your

expenses will come down, and they did."

By dispatching together, customers can have the closest dealership come to service their equipment and pay less on mileage for the service, though they

> might have to wait longer; or if they need immediate assistance and a dealership further away is available, they will pay slightly more on the travel rate. This has given the dealerships the ability to be completely transparent with customers, reducing the amount of customer concerns on their bills. "We can show customers that the guy 15 minutes from you will be ready in 3 hours, or I can

in 3 hours, or I can send someone from my branch right now but you're going to have to pay more on the travel rate," says Dave Dyer.

Another easy-to-spot routing inefficiency

Another easy-to-spot routing inefficiency was where each technician was assigned.

Since the technicians take the trucks home at night, by sharing location data across the branches managers realized that some technicians were working at a CAT dealership further away than the dealership closest to their home. By re-assigning certain technicians to a closer dealership, the dealerships have been able to save even more on fuel.

A MAINTENANCE, FUEL AND SAFETY TOOL

Saving on Costs and Time For maintenance and safety, the transparency telematics offers a company is practically endless. For maintenance, Toromont CAT is able to share vehicle trouble code alerts with its maintenance provider for improved preventive maintenance.

Another challenge Dave Dyer was facing



In one example, Toromont CAT had one driver that was idling anywhere from 33-40% every day, but once management showed him the data, his average is now 3-4% idle time per day.

was the need for better maintenance recordkeeping overall. "We had a fairly decent maintenance system but what we didn't have was a way to accurately record that data," he says, citing that this included receiving vehicle fault codes in a timely manner as well as managing regularly scheduled maintenance intervals. In fact, the capital's Ministry of Transportation at one point had sent a letter to Toromont CAT urging the company to improve its overall compliance or risk being audited. "There wasn't anything we could've given them for maintenance, although we were doing the work, so that is also what encouraged me," he says, adding that he wanted to avoid getting audited altogether but also ensure that if an audit did happen, the company had all the data they needed.

Dave Dyer has also been a fan of the

Geotab system for the safety aspects. He says that Toromont CAT has had one serious accident since having the system, and by using the real-time GPS information and telematics on driver behavior he was able to prove the company's driver wasn't at fault.

This information has also been useful to Mr. Dyer as a training tool. He uses it to show drivers what could've been done differently in order to prevent a particular mishap, whether or not a Toromont CAT driver was at fault. "It helped us straighten out issues right away," he says, adding that prior to using telematics, the company had a fairly bad safety record on the road, so decreasing these accidents has significantly minimized the company's risk for audits.

Along this same vein, the fuel and wear-and-tear savings by managing and improving driver behavior has also been staggering.

"You can change the behavior of the



driver just by showing them," Mr. Dyer says. In measuring behaviors like idling, harsh cornering and seatbelt use, he gets a graph each week ranking the different drivers and how much more their trucks costs to operate than a driver with fuel efficient habits.

"How you can use the data from telematics is endless," he says. "I'm even learning today some of the things I'm able to do. The visibility has opened so many doors for us."

Source: Geotab Inc.











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Agenda

World of Concrete Europe - Exhibition & Forum

September 6 - 7, 2016 Paris, France

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

MINExpo

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 Montreal, QC Canada

APEX

May 2 - 4, 2017 Amsterdam, The Netherlands

IRT Asia 2017

May 25 - 27, 2017 Bangkok, Thailand

Canada North Resources Expo

May 26 - 27, 2017 Prince George, BC Canada



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