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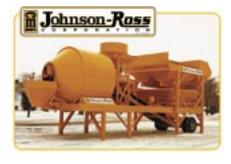














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## **InfraStructures**

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THIS ELECTRONIC VERSION OF INFRASTRUCTURES IS MADE AVAILABLE FOR THE SOLE PURPOSE OF GIVING OUR ENGLISH SPEAKING READERS A TASTE OF THE ORIGINAL PRINTED VERSION OF THE MAGAZINE.

WE WILL TRY TO PUBLISH AS MUCH OF THE EDITORIAL CONTENT OF THE PRINTED VERSION AS POSSIBLE GIVEN THE TECHNICAL LIMITATIONS.

#### Welcome

Throughout its eight years of serving the French speaking users of heavy machinery and specialized equipment in Canada, InfraStructures has established itself as the most acknowledged reference in its field. All other magazines have a different scope or focus. None offer a better mix of local content, important industry news, good circulation and reasonable rates for both readers and advertisers.

As you may know, our next major step for 2005 is in the making: an English print version of InfraStructures – distributed by mail across Ontario and the Maritimes. If you are interested in receiving the English print version of InfraStructures next year, please send us your coordinates by mail or e-mail.

For the year 2004, issues of the English online version will feature more content than last year. We encourage you to send in your news releases and articles which we will gladly publish free of charge.

Finally, we offer a great advertising package: Buy space in our French print version and get published in the English online version free of charge. Please call us to discuss your advertising plans in detail.

- senther and Villand

Publisher/Editor



On the front cover : many machines were hard at work on a large demolition project.

Among them, Delsan A.I.M.'s Liebherr 954 Litronic equipped with a

brand new LaBounty MSD 3000R Saber Series shear.

#### In the News...

## SR TELECOM RECEIVES \$3 MILLION IN ADDITIONAL ORDERS IN INDONESIA

SR Telecom(TM) Inc. announced that it has received additional orders valued at over \$3 million from Lintasarta, the largest data and corporate network communications provider in Indonesia. This is the largest set of add-on orders for a project started in September 2003. Lintasarta has selected the airstar™

wireless broadband solution to provide ATM, frame relay and clear channel services to its customers in the Java, Kalimantan and Sulawesi regions of Indonesia.

With these orders, Lintasarta will add airstar base stations and hundreds of CPEs (Customer Premises Equipment) to their existing network of more than 20 airstar systems. Deliveries are scheduled to commence immediately.

"We are delighted that Lintasarta has once

again selected the airstar solution for what has become a very extensive infrastructure project," said Pierre St-Arnaud, SR Telecom's President and Chief Executive Officer. "They have demonstrated a strong belief in airstar's features and benefits and in the quality of services SR Telecom renders. Their project is proceeding as planned, and we look forward to further advancing their network expansion across the Indonesian archipelago. This order further reinforces our leading position in the Broadband Fixed Wireless Access market in this region."

With product availability at 3.5, 10.5, 26 and 28 GHz, the advanced and adaptive airstar platform addresses the needs of service providers and carriers who offer metropolitan broadband connectivity services. airstar's intelligent ATM-based technology optimizes spectrum use through packet-based dynamic bandwidth allocation, enabling it to handle a wide variety of services and provide on-demand bandwidth quickly, reliably and economically. airstar is also used for cellular transmission infrastructure applications and has been deployed in Europe, Asia, Latin America, the Middle East and North America.

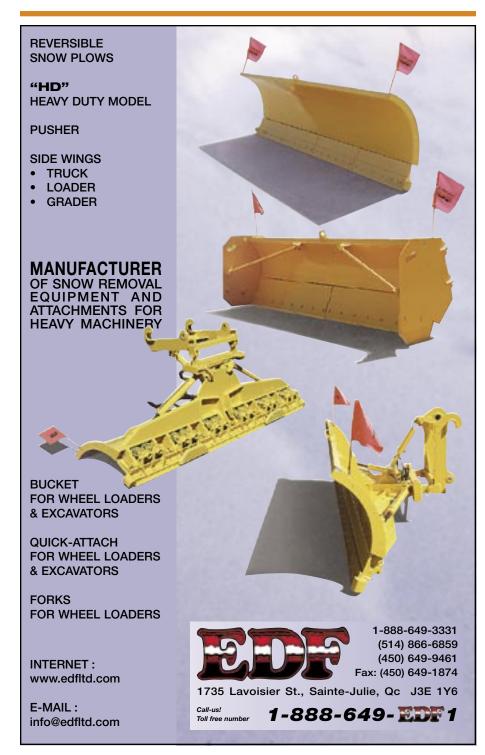
Source: SR Telecom

## SR TELECOM SUBSIDIARY LAUNCHES EXPANDED COMMERCIAL OPERATIONS IN CHILI

SR Telecom Inc. recently announced that its Chilean network operator subsidiary, CTR, has been granted a license by the Minister of Public Works and Telecommunications of Chile that allows CTR to provide urban wireless telecommunication services in the cities of Temuco, Talca, Los Angeles and Chillan. CTR expects to obtain a similar license for the cities of Osorno and Puerto Montt in the near future.

SR Telecom will deploy its broadband angel™ product for this network application. The angel deployment will permit CTR to offer carrier-class telephony and high-speed Internet access to urban customers at very competitive prices.

"The pilot project using our angel solution in Temuco was a definitive success, and we are very pleased to begin deploying angel in this region, which is contiguous with CTR's current service area," said David Adams, SR Telecom's Senior Vice-President, Finance and Chief Financial Officer. "This deployment is a part of our previously announced initiative to deploy up to 6,000 new lines into several urban areas of Chile. In 2004, we anticipate



deploying approximately 4,000 of these lines. The cost to us is minimal as we will be using surplus angel inventory. Combined with the recently approved increase in access charges, this initiative should enable CTR to achieve EBITDA of approximately \$7 million on an annualized basis by the end of the current fiscal year."

angel™ is a premier next generation Broadband Fixed Wireless Access product that combines the most advanced multiplexing (OFDM), Transmission (Non Line of Sight-NLOS), and modulation (QAM) technologies to deliver DSL-equivalent data rates and carrier-class voice services within significantly less radio frequency spectrum than other solutions. Additionally, angel's extensive network management capabilities optimize deployability and operability. Developed in close collaboration with a large service provider, angel boosts subscriber coverage to levels that can exceed 95% of a service provider's target market area, and remains cost effective in even the smallest applications.

Comunicacion y Telefonia Rural (CTR) is a provider of local telephone and Internet access services to residential, commercial and institutional customers in a large, predominantly rural area of Chile. CTR is a majority-owned subsidiary of SR Telecom.

Source: SR Telecom Inc.

#### ALSTOM AWARDED CONTRACT BY HYDRO-QUEBEC IN CANADA

Alstom has recently received an order from Hydro-Quebec for the Peribonka project, a new underground hydro power station located on the Peribonka river, some 160 km northeast of the lake Saint-Jean in the province of Quebec, Canada.

The scope of work covers design, manufacturing, transport to site, installation and commissioning of three Francis turbinesgenerators units of 130 MW each, as well as speed regulators and static excitation units. Design work is currently underway with manufacturing scheduled to begin in 2005. The first unit is expected to start commercial operation in December 2007 and the last one by March 2008.

Source: Alstom Canada Inc.

### BENDIX SPICER FOUNDATION BRAKE LLC BEGINS OPERATIONS

At the end of June, Bendix Spicer Foundation Brake LLC officially became operational following corporate approvals from partners

Bendix Commercial Vehicle Systems LLC and Dana Corporation. The joint venture – head-quartered in Elyria, Ohio, and with technology centers in Elyria and Kalamazoo, Mich.

 offers a full portfolio of advanced wheel-end braking systems components and technology from the combined parent organizations. It integrates the braking systems expertise from Bendix and the Knorr-Bremse Group, with the axle and brake integration capability of Dana, for a powerful long-term partnership between the organizations.

Source: Dana Corporation
Bendix Spicer Foundation Brake LLC

### VOLVO CE ESTABLISHES NORTH AMERICAN ENGINE REMANUFACTURING

Volvo Construction Equipment has acquired the engine remanufacturing- related assets of ECHO Industries, Inc (ECHO), Charlotte, North Carolina; the primary supplier of remanufactured engines to Volvo CE



in North America. The acquisition is effective 28 June, 2004. Scott Hall, Executive Vice President, Sales and Marketing for Volvo CE, said: "Remanufactured components for our construction equipment play a key role in developing Volvo CE's service to our customers. The acquisition of ECHO's engine remanufacturing-related assets secures for us a very strong platform from which to develop our North America engine remanufacturing business."

The market for Volvo CE's remanufactured engines has become quite substantial since they are updated to the latest version with the latest technical improvements. They are subjected to extensive testing and have the same warranty as new engines.

Operations at Volvo CE's newly acquired engine remanufacturing facility will be carried out without interruption by the current staff.

Source: Volvo Construction Equipment

## VOLVO CONSTRUCTION EQUIPMENT SELLS COMPACT MOTOR GRADER PRODUCT LINE TO CURRENT MANAGEMENT

Volvo Construction Equipment (Volvo CE) has sold its compact motor grader business to Champion LLC, Charlotte, North Carolina, a company organized by Gary Abernathy, manager of the Volvo compact motor grader product line since 1997. Abernathy became of manager of the business in 1993 under its previous owner, Champion Road Machinery, Ltd., which was acquired by Volvo CE in 1997.

The acquisition by Champion LLC of the Volvo CE compact motor grader product line, which consists of the Volvo G60, Volvo G66, Volvo G80, andVolvo G86, is effective July 1, 2004. The products will be marketed by the new company under the "Champion" brand as models C60, C66, C80, andC86. Champion LLC will manufacture the line of compact graders at thepresent production facilities in Charlotte.

The compact motor grader product line is well established in the North America market – sales in 2003 were nearly US\$4.5 million – and all VolvoCE dealers will have the opportunity to retain the distribution rights to the equipment from Champion. Volvo CE will continue to support all Volvo-branded compact motor graders in accordance with the Volvo CE warranty policy, and the current parts ordering process managed by thecompact motor grader facility in Charlotte will remain in effect.

Champion LLC will be responsible for parts and customer support for Volvo compact motor graders that are out of warranty. Compact motorgraders built by the Charlotte production facility after July 1, 2004, will carry the Champion brand.

This sale of the compact motor grader product line will have no effecton the manufacture and marketing of the G700B Series motor graderproduct range that is manufactured by Volvo Motor Graders in Goderich, Canada.

Source: Volvo Construction Equipment

#### CAT LIFT TRUCKS INTRODUCES P3000-P7000 SERIES LIFT TRUCKS

Cat Lift Trucks presents a new series of pneumatic tire lift trucks prepared to tackle even the most demanding applications. The P3000-P7000 family comes in nine different models and three different fuel configurations (gasoline, LP gas and diesel) and provides Features to keep operators productive during

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long work shifts.

With a low open step, a handy grab bar and adjustable position hydraulics, it's clear that these lift trucks were designed with operator comfort and convenience in mind. The full suspension seat provides a comfortable ride, while the elastic comfort strap reduces the risk of cinching – even when riding in reverse.

The heavy-duty drive and steer axles, and the steel frame, provide a solid foundation for these hard-working units. Compact dimensions, combined with industry competitive travel lift and lowering speeds contribute to productivity. Narrow mast channels and well-positioned hose and chain routings to give the operator good visibility, while the absence of cross bars in the overhead guard improves upward views.

P Series Cat® lift trucks are designed to help keep cost of ownership low. These lift trucks have extended 500-hour service intervals, which can help reduce routine maintenance over the life of the truck. A system for tracking operator presence, a ground speed control option and warning lights also help protect your investment. Even the engines are designed to help bolster fuel economy. They exceed 2004 U.S. Environmental Protection Agency (EPA) emission standards.

Cat Lift Trucks assembles the P3000-P7000 Series at its manufacturing and distribution headquarters in Houston, Texas. Cat Lift Trucks offers a full line of durable lift trucks with models ranging from 2,200 to 33,000 lbs. capacity.

Source: Cat Lift Trucks

### OSHKOSH TRUCK COMPLETES PURCHASE OF JERR-DAN CORPORATION

Oshkosh Truck Corporation announced it has completed the acquisition of 100 percent of Jerr-Dan Corporation's stock from an affiliate of Littlejohn & Co. Jerr-Dan is a leading towing and recovery equipment manufacturer. Oshkosh financed the \$80 million deal from available credit facilities.

"This acquisition further diversifies Oshkosh Truck within its fire and emergency market, and we're confident that Jerr-Dan will quickly contribute to our overall performance," said Robert G. Bohn, Oshkosh's chairman, president and chief executive officer.

Oshkosh management expects to provide additional financial details during its earnings conference call on July 27.

Jerr-Dan Corporation, headquartered in Greencastle, Penn., is a leading manufacturer of superior quality towing and recovery bodies. Over the past three decades, Jerr-Dan has grown into one of the world's leading towing and recovery equipment brands. Its product line, which covers the full range of vehicle towing and recovery applications, is distributed through independent distributors throughout the U.S., Canada, Mexico and Europe. More information about Jerr-Dan is

available at www.jerr-dan.com.

Source: Oshkosh Truck Corporation

## CATERPILLAR ENGINEERS NAMED INVENTORS OF THE YEAR FOR WORK ON ACERT® TECHNOLOGY

Caterpillar Inc. proudly congratulates our employees, Jim Weber and Scott Leman, today named National Inventors of the Year for 2004 by the Intellectual Property Owners Association. Weber and Leman were



team members of the extended group of Cat employees who created the company's breakthrough ACERT® Technology, which significantly reduces Caterpillar diesel engine emissions. The company has reduced onhighway diesel emissions in trucks and buses by nearly 90% since 1988 and will reduce those emissions another 90% by 2007 with ACERT Technology.

"When we formed the ACERT team, Jim Weber was one of the first people we called. Jim is a leader, a mentor, a brilliant engineer and scientist. He went back to the basics of physics in combustion for inspiration," said Tana Utley, Caterpillar's Director of Engineering for ACERT. "Scott Leman is also a gifted engineer with an extensive background in fuel system technologies. In this case, he specialized in variable valve actuation, knew what was possible and how it could fit with the other technologies in forming ACERT."

Weber and Leman invented a new air

management system combined with precise valve control to reduce emissions at the point of combustion rather than downstream in the exhaust. An advanced air system with series turbochargers and a novel variable valve actuation device precisely provides the optimal quantity of cool, clean air into the combustion chamber at various engine speeds and loads thereby enabling more complete combustion and superior fuel economy. This invention combined with advanced fuel systems, engine electronics and effective aftertreatment make up ACERT technology, cost- effectively reducing emissions, which betters the quality of life for all of us.

This award is positive reinforcement of Caterpillar's proven leadership in engine electronics, fuel injection systems and combustion technology. Rich Thompson, recently retired group president who manned the helm during the creation of ACERT, says the award highlights Caterpillar's leadership in technology. "We are more than yellow iron today. We are a high-tech company with brilliant engineers and scientists on the job creating new products and increasing value for our customers," Thompson said.

All Caterpillar on-highway truck and bus engines now in production are equipped with ACERT technology. The technology is the foundation to meet future emission regulations for the company's entire diesel engine product line, including construction and mining machines and power generation units.

#### **ENVIRONMENTAL RESTORATION WORK** SET TO START AT SEPT ILES AIRPORT

On July 14, Transport Minister Tony Valeri announced the award of a contract to carry out environmental restoration work at the Sept Iles airport.

"I am pleased to announce this investment, which reflects Transport Canada's commitment to manage its contaminated sites in a responsible and efficient manner," said Mr. Valeri.

The contract for \$741,350 was awarded to Global Environnement and involves the excavation of buried materials in the airport's former dumpsites and their disposition in a more secure site. This restoration work is being initiated to maintain the groundwater quality. Including today's project, Transport Canada has invested more than \$2 million since 1996 in environmental restoration projects for the Sept Iles airport.

"This initiative demonstrates Transport Canada's sound management of its proper-

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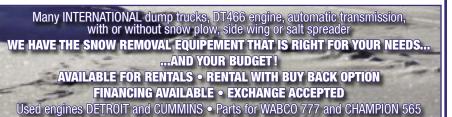
2002 SCHAEFF 823, 483 hours, quick attach, 3rd valve, 1 yd bucket with bolted-on blade



2000 SCHAEFF 863, 390 hours, quick attach, 3rd valve, 2.0 yd bucket



2003 TEREX 873 - DEMO - quick attach, 3rd valve, 2.75 vd bucket, CÔTÉ 12 ft «One Way» snow plow





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Many SICARD Jr, SMI 5250, SI-CARD 7200, VOHL DV4000 snow

......from 6 000 \$ to 150 000 \$



FIAT ALLIS FR15 1983 grader, quick attach, 3rd valve, 3 vd bucket, very good condition



2003 TEREX 860 SB loader-backhoe, DEMO, 70 hours, A/C, ride weight 3600 lbs, width 35.4 in., control, extendable boom, 3rd Kubota diesel engine valve on the front



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www.w-cote.com E-mail: info@w-cote.com ties," added Mr. Valeri. "Restoring these facilities is concrete proof of the Government of Canada's commitment to maintaining a healthy environment for Canadians."

Funding for this project was provided for in the March 2004 budget and is therefore built into the current fiscal framework.

Source: Transport Canada

### METSO'S DYNAPAC GROUP SALE HAS BEEN CLOSED

Following the approval of the necessary competition authorities Metso Corporation has completed the divestment of its compaction and paving equipment group, Dynapac, to the Nordic private equity investor Altor.

The purchase price was paid and Dynapac

was transferred to the buyer on June 30, 2004. The debtfree divestment value is estimated to be EUR 283 million. Metso and Altor reached an agreement of the sale in April 2004.

The divestment has a significant positive effect on Metso's gearing, which will decrease approximately 27 percentage points. Following the divestiture the value of goodwill and other intangible assets on Metso's balance sheet will decrease by approximately EUR 130 million.

The divestment of Dynapac is a part of Metso's strategy to focus on serving pulp and paper industry, rock and minerals processing and process automation customers. Dynapac, which was a part of Metso Minerals,

does not have customer based synergies with other businesses within the business area.

Source: Metso Corporation

### SNC-LAVALIN EXPANDS ITS PRESENCE IN POLAND

SNC-Lavalin Group Inc. is pleased to announce the creation of its new subsidiary, SNC-Lavalin Megadex Sp. z o.o.

Based in Warsaw, SNC-Lavalin Megadex was created by taking on certain projects and personnel of Elektrim Megadex S.A., a subsidiary of the Elektrim Group, and the leading engineering company in Poland in the power production sector. Elektrim Megadex is active in both domestic and international markets.

"SNC-Lavalin Megadex has been set up to be immediately operational," said Jean Claude Pingat, President, SNC-Lavalin France. "It has already begun work on three turnkey projects, totaling over CAN \$55 million; two in Lithuania and one in Germany."

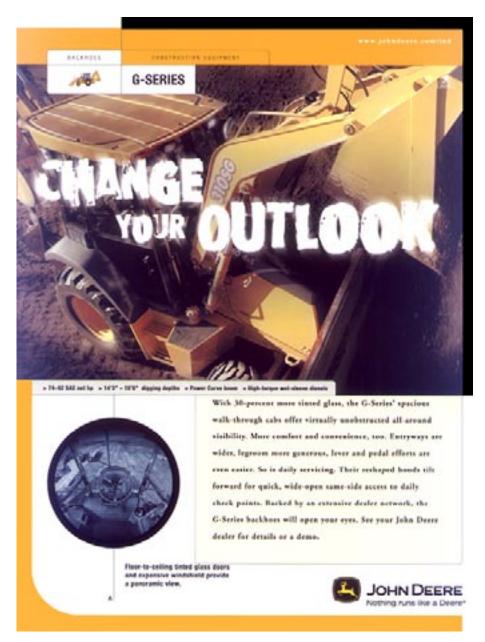
The two projects in Lithuania are for the supply, installation and start-up of approximately 10 gas boilers at the Ignalina nuclear power plant. This contract is part of Lithuania's commitment to shut down and reconvert nuclear reactors in preparation for joining the European Union.

The project in Germany is for the supply and installation of two boilers as part of the construction of a waste incineration factory in Zorbau, near Leipzig.

"Megadex enjoys an outstanding reputation in the power sector in Europe, Africa, the Middle East and Asia, particularly in the field of super-critical coal-fired generating facilities", said Klaus Triendl, President SNC-Lavalin International and Executive Vice-President, SNC-Lavalin. "They bring valuable technical and regional expertise to our Power Division, and are an excellent addition to SNC-Lavalin's extensive presence in the power sector."

SNC-Lavalin Megadex will be headed up by Georges Sontag, President of Chovet Engineering, a subsidiary of SNC-Lavalin France specialized in the engineering of industrial processes, and already present in Poland.

"Aligning the skills and personnel of Chovet and SNC-Lavalin Megadex creates a centre of excellence for a variety of industrial expertise," said Mr Sontag. "This alliance will also benefit from the vast expertise and international network of SNC-Lavalin Group







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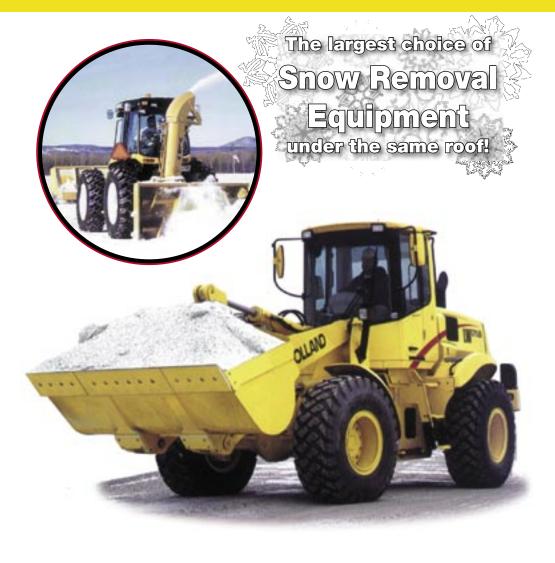














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Inc."

"The creation of SNC-Lavalin Megadex is part of SNC-Lavalin's strategy to strengthen its position in central Europe with versatile teams offering both technical expertise and a firm understanding of local industries," added Mr Pingat. SNC-Lavalin France has been in Hungary since 1995, and it opened a new office in Slovakia in 2003.

Source: SNC-Lavalin Inc.

## GEHL COMPANY AND MANITOU ANNOUNCE STRATEGIC ALLIANCE IN THE U.S. TELE-SCOPIC HANDLER MARKETS

Gehl Company announced the formation of a strategic alliance with Manitou, the world's largest manufacturer of telescopic handlers. Beginning in 2005, Gehl and Manitou will distribute select models of each other's telescopic handler product lines in the U.S. agricultural and construction markets through their respective dealer networks. Pursuant

to a License Agreement with Manitou, Gehl will also begin to manufacture two series of Manitou compact telescopic handlers for the agricultural and construction markets at Gehl's facility in Yankton, South Dakota.

Commenting on the new relationship, Gehl's Chairman and Chief Executive Officer, William D. Gehl, noted: "This is an excellent opportunity for Gehl Company to broaden its product offerings to better serve the growing U.S. telescopic handler markets and to expand production at our Yankton, South Dakota manufacturing facility. Manitou's worldwide leadership position in telescopic handlers will be a strong asset in our mutual goal to further grow our presence in the U.S. telescopic handler industry. This strategic alliance will allow us to respond quickly to emerging market trends by leveraging our combined design and manufacturing technologies."

In conjunction with the new business relationship, Manitou has purchased 961,768 shares of newly issued Gehl common stock at an aggregate purchase price of \$19.8 million or \$20.60 per share, the closing price of Gehl stock on July 21, 2004. During the term of the alliance, Gehl has agreed to recommend the nomination of Marcel Claude Braud, Manitou's CEO, for election to the Board of Directors of Gehl at its next Annual Shareholder Meeting.

Source: Gehl Company

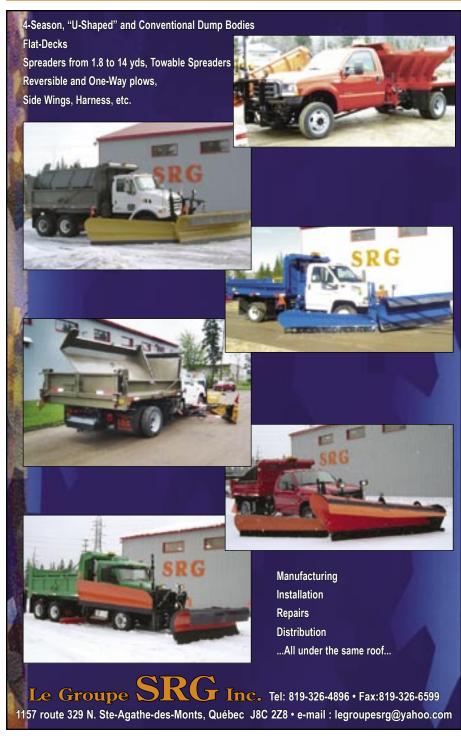
## RENTAL SERVICE CORPORATION TAPS NATIONAL EQUIPMENT REGISTER TO COMBAT EQUIPMENT THEFT

With the goal of deterring equipment theft and increasing its recovery rate of stolen equipment, Rental Service Corporation, a leading equipment rental provider has registered its equipment fleet with the National Equipment Register (NER).

With Rental Service's equipment fleet now added to NER's databases, NER will be able to identify equipment belonging to Rental Service – even before a theft is reported.

Through its 24-hour hotline, NER provides expert advice, as well as theft and ownership information to law enforcement agencies seeking to identify suspicious construction and farm equipment. NER also coordinates a national training program that teaches police officers the common 'red flags' to watch for when investigating suspicious equipment.

Source: Rental Service Corporation National Equipment Register



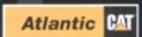
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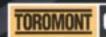


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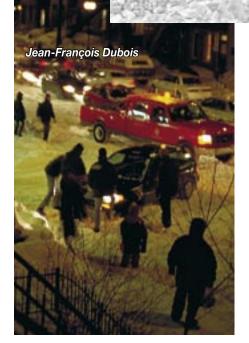


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## Snow Removal in the Age of the ITS



For the past several years, the Estrie division of the Quebec ministry of Transport has taken on the mandate of enhancing its knowledge of its roads network in order to better meet the needs of its users. To do this, the integration of the Intelligent Transportation Systems (ITS) has proven to be a turning point in the implementation of the ministry's orientations on the matter. It is within this management framework that the integrated center for monitoring (ICM) was born in October of 2003. Functioning 24 hours a day, 7 days per week, the ICM acts as the nerve

centre for information arriving from various sources.

#### THE PATROLLER

A vital link to the system, the patroller's mandate is to travel the road network in order to detect any irregularity. Each section of road is thus verified and anomalies such as bank erosion, obstacles on the roadway, dead animals, defective signage, etc, are registered as alerts. These alerts are analyzed on an individual basis by the person responsible for the territory and redistributed as work orders to the

concerned individuals as the case may be. The patroller's role is also to offer assistance to users of the road network in the event of mechanic breakdowns as well as offer support in emergency situations by directing traffic. The patrol vehicle is equipped with all of the advanced technology necessary (cellular phone, GPS, radio transmitter, etc.) and the patroller is in constant communication with the various interveners (foremen, team leaders, technicians at ICM, Sûreté du Quebec, etc.) They are the technician's eyes at the ICM.

#### THE CONSOLE

Located in the ICM room which is situated at the service center in Sherbrooke is a



console equipped with several computers connected to large screens. The technician in charge of the console has access to a mass of information arriving from various sources. During the winter period, the technician is constantly informed on the evolution of the time and the temperature in order to make the best decisions. To do this, he has various tools at his disposal, such as roadside weather stations specially conceived to transmit data on the temperature in the air, of the pavement, the wind factor, visibility as well as the type of rainfall. These weather stations are a priceless source of pertinent



information which make it possible to predict in advance at which time a humid pavement will transform into a frozen one. With this information in hand and thanks to a basic training in meteorology, the technician will be in a position to analyze the evolution of the

local weather system and to issue an early warning. As a result, he will be able to send the necessary teams in order to spread the required abrasives before the ground even freezes. Strategically placed video cameras distributed throughout the territory also provide information as to prevailing conditions in a given sector. Given that patrollers and foremen cannot be everywhere at the same time, the technician can consult the

images transmitted by the camera to validate whether the temperature differs from one sector to another.

Road conditions are recorded by the technician in the computers and the information

then becomes accessible on the ministry's web site or by a designated telephone number.

#### **ONBOARD SYSTEMS**

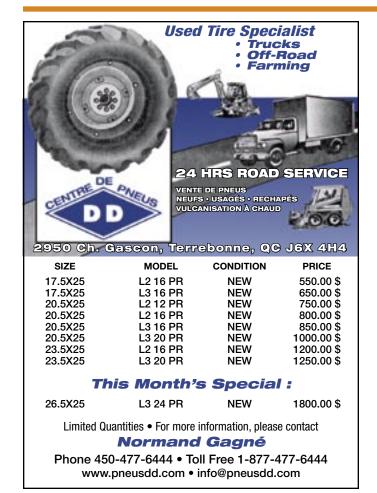
Operators assigned to winter maintenance



of roads are now aided in their work by an onboard computer that enables them to access specific information (history and suggestion of rate of distribution) in order to be able to control certain parameters of distribution, leaving them more time to control the truck. This computer also transmits certain information to the console's controller which provides an additional tool when making decisions. At the present time, only the ministry's trucks are equipped with these computers, but all trucks circulating on the Estrie's road network will be equipped in the near future.

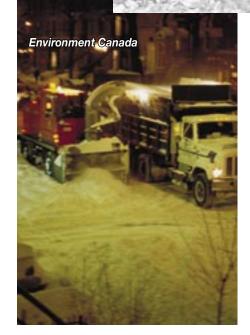
Finally, one of the medium-term objectives of the ITS project is to equip all trucks with automatic devices which would adjust the rate of distribution according to specific but predictable conditions (slopes, shaded zones, windy zones, etc.)

Still in its developmental stage, the Integrated Monitoring Center is most likely to experience a rapid evolution in today's tight management practices where the quality of service and the desire to reduce operational costs are a daily challenge.





# The Code of Practice of the Environmental Management of Road Salts



Do you ever look at the way you provide your services to Canadians and wonder if you could do so in a way that would have less impact on the environment?

In the realm of road maintenance, you may be able to do more to protect the environment while still maintaining road safety.

Every year, approximately 5 million tonnes of road salts are used in Canada. Environment Canada conducted a science assessment and concluded that high releases of road salts around storage and snow disposal sites and through run-off and splash from

roadways pose a serious threat to aquatic environments, plants and animals.

On April 3, 2004 the Government of Canada finalized its Code of Practice for the Environmental Management of Road Salts. The Code is designed to help municipalities and other road authorities better manage their use of road salts in a way that reduces the harm they cause to the environment while maintaining road safety.

#### **APPLICATION**

The Code applies to any public entity that uses or is responsible for the use of more than 500 tonnes of road salts per year on public roads in Canada or whose territory contains vulnerable areas potentially impacted by road salts. Road authorities that do not meet these criteria are still encouraged to follow the recommendations and implement best practices where they can to do their part for the environment. The Code does not supersede any laws or regulations in relation to road safety.

#### **RECOMMENDATIONS**

The Code recommends that road authorities prepare salt management plans that identify actions they will take to improve their road salt management practices in salt storage, general salt use on roads, and snow disposal. In addition, the plans should identify procedures for training, monitoring progress

and record keeping. The content and level of detail in a salt management plan can vary according to the individual organization's size, needs, capability and budget.

#### **BEST MANAGEMENT PRACTICES**

To help road authorities in preparing their plans, the Transportation Association of Canada (TAC) has published nine guidance documents that outline best practices in salt management, how to develop a salt management plan and the requirements of a training program. The Syntheses of Best Practices – Road Salt Management can be found on the TAC website at www.tac-atc.ca.

#### **TIMELINE**

Salt management plans should be prepared within one year of the road authority becoming subject to the Code and their implementation should be initiated in the financial period immediately thereafter. Road authorities that hire contractors should also ensure that those contractors comply with the measures of their salt management plans related to the contractor's work.

#### REPORTING

Road authorities are asked to provide Environment Canada with a letter stating their intention to prepare salt management plans within six months of becoming subject to the Code. Environment Canada also asks road

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authorities to report their progress on a yearly basis. These reports will allow Environment Canada to measure the success of the Code and its ability to reduce harm caused to the environment.

#### FOR MORE INFORMATION

Environment Canada has published a number of success stories demonstrating the environmental and cost benefits and improvements in road safety that can result from improving road salt management practices. These studies along with the Code of Practice, additional information on salt management and related links can be found at <a href="http://www.ec.gc.ca/nopp/roadsalt">http://www.ec.gc.ca/nopp/roadsalt</a>. If you have any questions or for more information about salt management, email roadsalts@ec. gc.ca or contact Environment Canada's regional offices at:

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Dartmouth, NS B2Y 2N6

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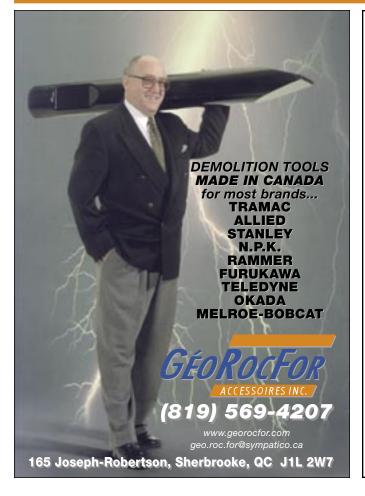
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#### **New Product Line at ELP!**

Elp inc. now manufactures a full line of truck bodies. Models ranging from standard sand and gravel types to light excavation and heavy duty.

The goal is not to mass produce but to answer a demand for specialty type bodies needed in today's market and to better



serve our customers and dealers. Because of our S.B.I. interchangeable box system the production of a dump body is different than a standard type body. More and more there is a demand for multifunctionnal bodies thus requiring more options.



ELP inc. already being in the custom market, all the more reason to fabricate custom dump bodies on-site. Options are installed during fabrication improving productivity and quality.

ELP inc. offers its dealers a ready to install body, completely assembled and pre-painted. This concept considerably reduces the installation time for the dealer and allows the company a better control over quality of the finished product, as well as much quicker reaction time to make manufacturing changes.

All this is part of ELP inc. efforts towards perfecting its product line. The company has always had for mission to produce top quality equipment.

Source: ELP inc.

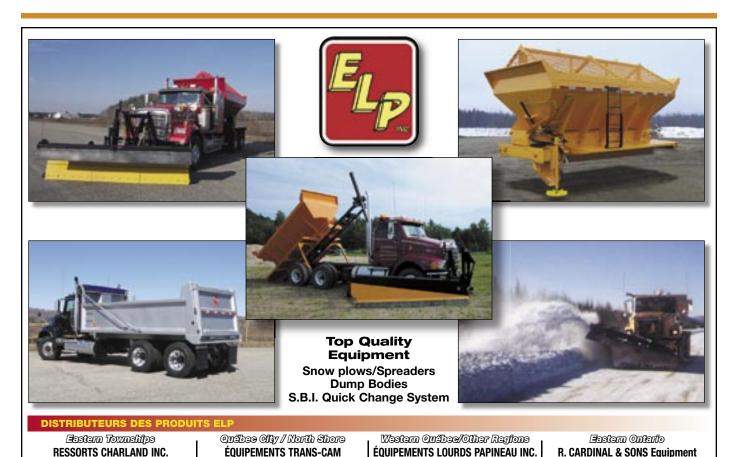
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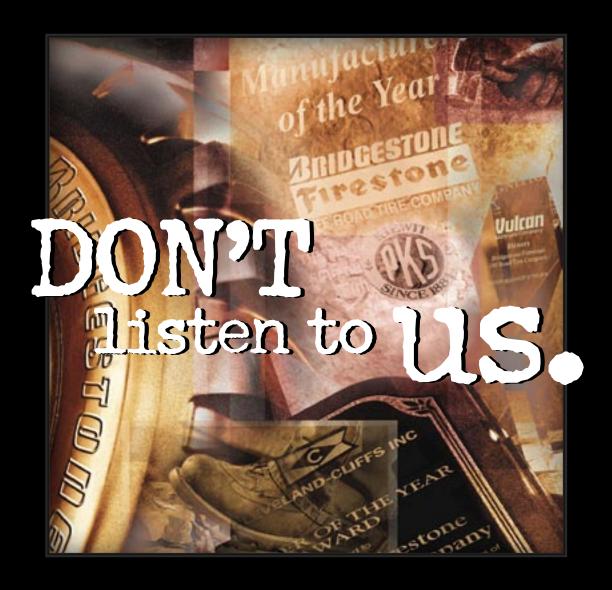


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## BRIDGESTONE Firestone OFF ROAD TIRES

### The City of Gatineau Chooses SRG

The City of Gatineau recently took delivery of a GMC Top Kick 5500 (2WD) truck for its Public works department. The truck is equipped with a complete snow removal package manufactured by Le Groupe SRG Inc. located in Sainte-Agathe-des-Monts in the Laurentians, north of Montreal.

The equipment package includes a SRG-BE-126 four season dump body / spreader box, a SRG-2000HD-A120 reversible snow plow, a SRG-2000-ALC-108 side wing and a SRG-2000-LC low profile harness.



This truck is able to handle snow removal, recreational area and park maintenance and day to day road maintenance operation.



Since 1983, Le Groupe SRG has manufactured and designed many types of municipal equipment for vehicles of 8000 kg to 37,000 kg GVW

Le Groupe SRG manufactures dump bodies, delivery platforms, as well as "U" and "V" shaped salt spreaders. In addition to manufacturing their own equipment, Le Groupe SRG installs and repairs all brands of equipment, all under the same roof.

Source: Le Groupe SRG Inc. Giovanni Fiorio, (819) 326-4896

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| 20.5R25 | XTLA  | 50%        | 650.00  |
| 20.5R25 | XHA   | 95%        | 1950.00 |
| 23.5X25 | L3    | 50%        | 600.00  |
| 23.5R25 | XHA   | C/O        | 2600.00 |
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## Rotating Snow Clearers Used with Mercedes-Benz Unimog Vehicles on the Grossglockner Mountain Pass



All over the world, the Mercedes-Benz Unimog has become synonymous with spectacular applications, operating under at times extreme conditions. During the last week of April, Austria played host to one of the latest events to reinforce this claim. More

of Grossglockner Hochalpenstrassen AG to clear the holiday route to Italy after it had been blocked by frozen and crusted snow during the winter months.

Using extremely powerful rotating snow clearers (snow cutters, snow blowers and blower-cutters) supplied by various companies – e.g. Schmidt Winterdienst und Kommunaltechnik GmbH, Toni Kahlbacher GmbH & Co. KG and Beilhack Systemtechnik und Vertriebs GmbH – the

successful opening of the pass took place at the Hochtor Tunnel on April 26, 2004: the tunnel – the highest point on the pass road at 2,503 metres – was the meeting point for the two snow-clearing teams that had started out from the towns of Heiligenblut and Fusch. Over the next few days, the teams were able to clear the pass road, thus allowing the Grossglockner-Hochalpenstrasse to open in time for the start of this year's holiday and motorcycle season on May 1.

Source: DaimlerChrysler, Unimog



The photo shows Martin Daum (left), head of the Unimog/special-purpose vehicle product division of the Mercedes-Benz Trucks business unit at DaimlerChrysler AG, and Peter Embacher (right), operating manager at Grossglockner Hochalpenstrassen AG, during "cutting" near the Hochtor Tunnel on April 26, 2004.

than 600 guests from 17 countries as far afield as Spain, Russia and Korea gathered in Fusch at the foot of the Grossglockner – Austria's highest mountain at 3,798 metres above sea level – to witness what was a very special occasion: a total of 12 Unimog U 300 – U 500 implement carriers teamed up with the heavy-duty track-laying vehicles

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Fiedler, a reputed German manufacturer specialised in a wide range of implements, is a supplier to the world's largest and most prestigious auto manufacturers. AUSA has commissioned this firm to design and build its all-purpose implement system.

Professionals praise the quality and functional design of each of the implements built for the new MultiTask 250H. They also note the ease with which one accessory can be replaced by another. Each of the attachments that can be fitted to AUSA's new machines has been studied down to the smallest detail.

"That is how we have created some of the world's best-performing workhorses. A single truck is capable of doing jobs that it would normally take several different machines to do", states José Ramón Gómez, AUSA Commercial Director.

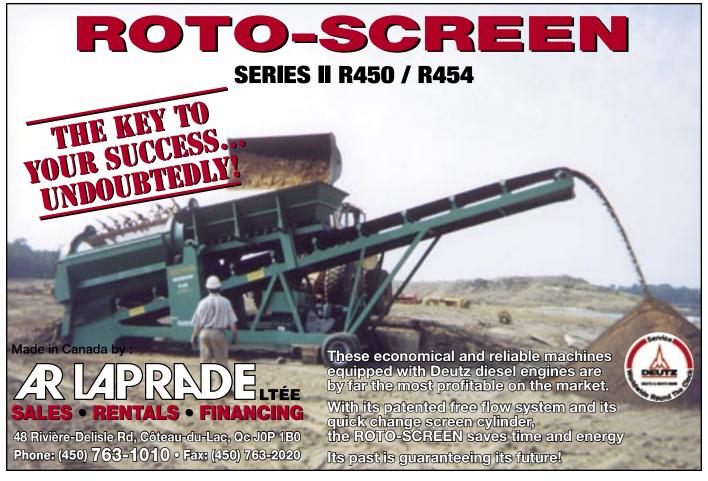
#### NO MACHINE OFFERS SO MUCH

The excellent selection of implements that were designed for AUSA's multiservice range are the best guarantee of their extreme versatility. Fiedler and AUSA worked closely

together to make the best choices, define the best designs and incorporate the most advanced technologies. "Our aim was to provide our customers with almost unlimited options. No other machines has ever been able to offer so many possibilities."

AUSA's Commercial Director is sure that these new machines will be a great success, "in, for example, the demanding German market". Gómez feels that Germany will be one of the best testing grounds of the performance of these new trucks. "In fact, we have already begun to see the first results."

Source: Automoviles Utilitarios S.A.







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## GM's Medium-Duty Trucks Add Four-Wheel-Drive Capability for 2005

Chevrolet Kodiak and GMC TopKick continue to deliver more of what customers demand from their medium-duty trucks. For the 2005 model year, "more" refers to off-road capability, thanks to factory-engineered four-wheel drive on C4500 and C5500 models. Four-wheel-drive Kodiaks and TopKicks begin production in July 2004.

"The GM-installed four-wheel-drive option is something commercial customers and dealers have been asking for," said Elliott Benson, product manager for the Kodiak and TopKick C4500 and C5500 models. "This response should exceed customer expectations across a wide range of industries, including forestry, snow plowing, landscaping, agriculture, tree trimming, utility work, and more. These new models will also meet the needs of retail buyers who demand four-wheel drive."

As Benson explained, many of these commercial users operate their vehicles off-road, where traction is critical. Being stuck at a work site – or not being able to reach the site – can carry tremendous costs for owners.

"Not only are these 4x4s able to get to the job, they bring with them enhanced agility. These trucks can make surprisingly tight turns in confined areas, providing

a tremendous advantage, whether you're plowing a parking lot or maneuvering in a tight construction site," Benson said.

Versatility is the name of the game for GM's medium duty customers. Four-wheel-drive Kodiak and TopKick models, for example, are available in a variety of wheelbases – ranging from 152 inches (386 cm) to 235 inches (597 cm) – in both Regular Cab and Crew Cab configurations. These go-anywhere medium duty trucks are powered by either the standard Vortec 8100MD V-8 gasoline engine or the available Duramax 6600 V-8 Turbo Diesel. Both powertrains are mated to the proven Allison 1000 Series five-speed automatic transmission.

Enhancing these vehicles' off-road capabil-

ity is an electronically controlled New Venture Gear Model NV273 two-speed transfer case, and aninstrument

panel-mounted rotary selector switch for 4L, 4H and 2H drive settings. Four-wheel-drive Kodiak and TopKick models also feature manually activated front locking hubs for additional traction capability and a heavyduty off-road skid plate to protect the transfer case.

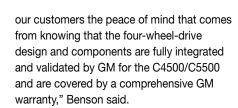
To enable engine power to be optimized for various operating conditions, all C4500/C5500 Series Kodiak and TopKick models feature electronic throttle control. It permits throttle progression to be optimized, giving the medium duty 4x4s outstanding throttle control for slow-speed parking lot maneuvers, as well as an immediate response when



power is demanded under the most rugged off-road conditions.

Four-wheel-drive C4500/C5500 Series Kodiaks and TopKicks measure up well against the competition in a number of areas. Superior off-road performance, outstanding maneuverability, stronger frames (80,000 psi/610,400 RBM), larger brakes (15-inch discs, front and rear) and more combine to create an outstanding product available only from GM dealers. Even the convenient instrument panel-mounted rotary switch used to engage the transfer case demonstrates the commitment to end-users; the competitor uses a floor-mounted mechanical shift lever.

"In addition to all of the product superlatives, Kodiak and TopKick 4x4 models give



#### MANEUVERABILITY, VISIBILITY

Class-leading attributes of Kodiak and TopKick begin with their maneuverability. Their wider front track permits a 53-degree wheel cut, resulting in a turning diameter as tight as 47 feet (14.3 m). In addition, their sloped-hood design and large windshield provide improved visibility for safety and a better view of the job site.

Kodiak and TopKick also feature state-ofthe-art exterior mirrors that are attached to the body-side cowl, reducing vibration during operation. These mirrors can fold forward and backward, making them less prone to damage.

The net result of the trucks' design is the ability to see objects on the ground as close as 13.8 feet (4.2 m) in front of the truck (as measured from the front bumper), giving a 13-foot (4 m) sight advantage over comparable competitive models (with their average of 26.8 feet (8.2 m)). That's even better than the forward visibility measurements of many compact pickup trucks.

#### **EXPANDED MODEL RANGE**

The Kodiak and TopKick C4500 and C5500 Series are available in Crew Cab, Regular and Commercial Cutaway Chassis Cabs, as well as vocational packages to cover school bus, fire and rescue, ambulance, shuttle bus, wrecker and snowplow requirements.

For larger tasks, the Kodiak and TopKick C6500, C7500 and C8500 Series trucks offer Regular and Commercial Cutaway Chassis Cab offerings, along with the Crew Cab and T-Series. This model range also includes LoPro (low profile) and Tandem axle variants.

Source: General Motors

## Volvo Trucks Brings Drivers New Level of Safety With Bendix ABS-6 Vehicle Stability Systems

Volvo Trucks North America, Inc. will bring an even higher level of safety to America's highways with the introduction of an advanced vehicle stability control system featuring protection from rollover and jackknifes. Volvo will offer the ABS-6 antilock brake system made by Bendix Commercial Vehicle Systems LLC on the Volvo VN and Volvo VHD. Beginning in early 2005, Volvo will offer Bendix® ABS-6 Advanced with ESP (Electronic Stability Program), to address a wide range of driving conditions. Bendix ABS-6 will be Volvo's standard antilock brake system in North America, while ABS-6 Advanced with ESP will be a customer-specified option. Antilock brake systems are required by law on trucks sold in North America.

"Safety has been at the core of Volvo's design and engineering for more than 75 years, and this continues our commitment to bring the best safety advances and technology to our customers," said Peter Karlsten,

president and CEO of Volvo Trucks North America.

ESP is able to selectively apply the brakes on individual wheel ends, depending on driving conditions, vehicle speed and other inputs from onboard sensors. This assists the driver to reduce speed, keep the vehicle in proper alignment, and reduce the tendency for the truck and trailer to slide or jackknife. This stability function is known as yaw control. In

addition to jackknifes, yaw control is a safety advantage in situations involving oversteer or understeer, and sudden transitions from dry to slippery surfaces.

The Roll Stability Program (RSP) – an element of ESP – monitors inputs from sensors and applies all available brakes on a vehicle



to rapidly reduce rollover potential while turning, a consideration for fleets operating high center-of-gravity trucks. Rollover is an especially dangerous accident for truck drivers, contributing to 58% of truck driver accident fatalities, according to a study by the University of Michigan Transportation Re-



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search Institute. RSP is a safety advantage in dry conditions involving curves, sudden lane changes and obstacle avoidance maneuvers.

Traction control is a feature of the ABS-6 Advanced configuration.

The ABS-6 Advanced system overlays the existing air brake system architecture and components with advanced sensors and electronic control units to achieve its advanced stability performance. This means technicians require minimal additional training to service the ABS-6 system. The system also has enhanced diagnostic and prognostic capabilities to assist technicians.

Volvo engineers have worked extensively with Bendix to test the ABS-6 system on Volvo VNs and Volvo VHDs, and to "tune" the system for optimal performance with Volvo trucks. This included harsh winter driving testing in northern Sweden. Volvo will offer Bendix® ABS-6 in three different configurations: with four wheel speed sensors and four brake modulators (known as 4S 4M); with six sensors and four modulators (6S 4M); and with six sensors and six modulators (6S 6M).

Source: Volvo Trucks North America

# Mike Ryan Wins at Pikes Peak with Freightliner Century Class Super Truck

Mike Ryan and his Freightliner Century Class® S/T Super Truck claimed the victory for the 7th time at the 82nd annual Pikes Peak International Hill Climb. Ryan competed in the big rig division against entries from Peterbilt and Kenworth. This was Ryan's eighth trip up the mountain in the No. 77 Freightliner Century Class.

The hill climb takes vehicles competing to achieve the fastest time up the mountain on a course of pavement, gravel and dirt with hairpin turns and sheer drop-offs. The race begins at 9,390 feet and finishes at the 14,110-foot summit of Pikes Peak.

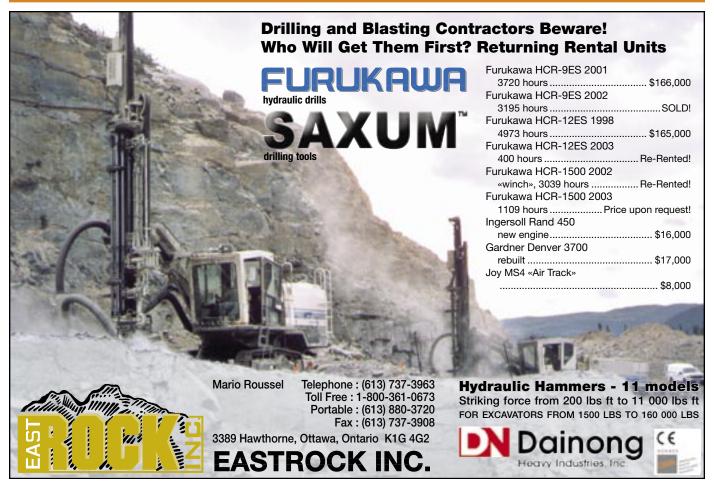
Ryan's race-modified Freightliner Century Class S/T features a racing version of the Mercedes-Benz 501 V-6 twin turbo engine that produces nearly 1,300 HP. In tests, the 8,000-pound truck topped out at speeds nearing 100 mph on the course. It also



features custom-made tires supplied by Michelin. These tires feature special rubber compounds and hand-carved tread which significantly improve traction and vehicle handling. In addition, the tires are filled with nitrogen gas rather than air to slow air pressure expansion.

Ryan finished the race with a time of 6:05:03, 36 seconds faster than the second-place time.

Source: Freightliner Trucks











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## Extreme Duty Hauling? Titan Trailers Answers With Industry's First Aluminum Body Live-Floor Trailer

At Waste Expo, held in Dallas in May, Titan Trailers Inc. presented the world's first high-capacity aluminum body self-unloading trailer specifically designed for extreme-duty applications.

Targeting businesses such as scrap metal, construction & demolition and aggregate hauling, Titan unveiled two ThinWall™ demonstration trailers featuring the Keith® steel V-Floor® unloading system from Keith Mfg. Co.

The new ThinWall V-Floor trailer combines the capacity, durability and light weight of

Titan aluminum body construction with the self-unloading efficiency and safety of a solid steel Keith Walking Floor® V-Floor® system.

According to Titan President Mike Kloepfer, the new trailer is Titan's response to increased demands for higher efficiency and improved safety in extreme duty applications. "The ThinWall trailer has become the preferred choice for many applications that demand maximum capacity and low lifecycle flatdecks. However, dump bodies generally reach their practical payload limit around 50 cubic yards and can have problems handling off-balance loads on uneven work sites. A



costs. With the new V-Floor system, we can now extend the benefits of ThinWall to customers who need the extra strength of a steel live floor."

Many of these applications are met traditionally by steel-body dump trailers and



48-ft Titan trailer, meanwhile, offers more than double the payload capacity – up to 130 cubic yards – while the Keith V-Floor system ensures that the trailer maintains a sure footing while it walks off the load. Since the Titan trailer has a covered top, it also offers a viable

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## Titan V-Floor trailers: Going to extremes for your business



48' Tandem-Axle Aluminum THINWALL™ Demonstration Trailer for Extreme-Duty Hauling Equipped with | WALKING FLOOR® steel V-Floor™ unloader the toughest all-aluminum body on the road. But now you can get your Titan custom-built with today's toughest live floor to take on "extreme duty" loads like scrap metal, aggregate and C&D debris.

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- higher capacity, safer unloading, more backhaul choices
- · payloads up to 145 cu. yds
- solid steel floor resists impacts and abrasion

Titan V-Floor trailers: going to extremes to be the best trailer for your business.

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#### **Titan Trailers Inc.**

1129 Hwy #3, R.R. #3, Delhi, Ontario, Canada N4B 2W6 Phone 519.688.4826 Fax: 519.688.6453 Email: info@titantrailers.com Website: www.titantrailers.com TRAILERS INC.
Strength Through Innovation

alternative for truckers who haul crushed cars through states that restrict them from using open-top or flat-deck trailers.

Keith Mfg. Co. first developed steel V-Floor systems for stationary installations in recycling yards. Keith's Bob Moore said the company has been eyeing aggregate and C&D markets for a number of years. "Then we got inquiries from waste management operations who had to start covering their landfills every day. They wanted to use the same trailers that deliver the garbage to hauling in their overburden. But the big trade-off has always been the extra weight of steel." With the development of newer high-wear, high-yield steels, Keith was able to develop a line of V-Floor systems that can withstand heavy impacts and abrasion without a prohibitive increase in weight. To handle fine abrasives, Keith eliminated seals from the V-floor design by overlapping the V-slats and mounting them on a full-length bearing.

Titan will custom-build the ThinWall V-Floor unloader for virtually any extreme duty requirement including multi-axle and B-Train units.

Titan recently returned from a highly suc-

cessful launch of a European pattern for the ThinWall trailer at the Recycling and Waste Management Exhibition in Birmingham, England.

#### **ABOUT TITAN**

Established in Delhi, Ontario, in 1979, Titan Trailers is a world-class innovation leader in the hauling industry long recognized for job-specific functionality and attention to manufacturing detail. Titan Trailers offers cost-conscious haulers a complete line of trailers utilizing advanced design and manufacturing technologies based on the patented ThinWall extruded aluminum panel. With the ThinWall process, Titan originated the move

to smoothside trailer design for improved fuel efficiency and payload capacity. Other Titan innovations include front access doors, the liftable "Hagen" shedder and an improved front catwalk for enhanced operator safety. Titan's production plant includes complete facilities for aluminum and steel fabrication as well as extensive in-house computer modelling systems for trailer design and testing. Titan focuses its extensive R&D activities on making its trailers the best business choice for operators in the custom trailer market.

Source: Titan Trailers, Sandy Kloepfer, (519) 688-4826 www.titantrailers.com

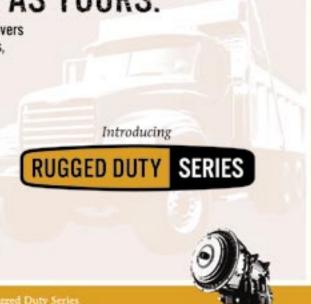


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For a complete listing of vehicle models featuring Allison Rugged Duty Series Fransmissions, contact your truck dealer or your authorized Allison Distributor. For the representative nearest you, go to www.allisontransmission.com.



#### **Innovative Grapple Scale for Log Loaders!**

RMT Equipment Inc, well-known as leader in Canada and United States to have developed the market of VEI weighing systems for wheel loaders, innovates once again with a new product for the forest industry: The VEI Helper P5 grapple scale for log loaders. This innovative new product was especially designed to avoid overloading the trucks and maximize production in the forest.

This is the first system of its kind using an integrated weighing chamber. The concept is clever, precise and especially resistant! The Helper P5 monitor with integrated printer is installed inside the cab and, using a button, the operator selects the right moment to weigh the load.

VEI created a weighing chamber located between the head of the grapple and the end of the dipper stick. This weighing chamber measures the stretching force exerted on the grapple and converts it into weight! The VEI Helper P5-GR1 for grapple log loaders adapts on a large variety of carriers and is offered in different configurations according to the application and the type of grapple used.

VEI, which has manufactured scales for more than 15 years is well-known with its Millennium and Helper P5 scales for wheel loaders and fork-lifts.

For over eight years, RMT Equipment has been the North American Distribution Center for VEI products and works with master distribu-



tors in Canada and the United States.

RMT Equipment will be present at the DEMO International Wood Show 2004 that will take place near Quebec City in September. Onsite, there will be a Liebherr excavator equipped with a VEI scale on its grapple.

Source: RMT Equipment Inc., Marc Lefebvre, 1-800-648-8132.



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Viking Lid-Ease® Strainers Provide Pumping Systems with First Class Protection

Viking Pump's Lid-Ease® strainers are specially designed to protect any pumping system by preventing solids or foreign materials from entering the pump. As a result, pumps and downstream process equipment experience fewer repairs, reduced downtime, and longer life.

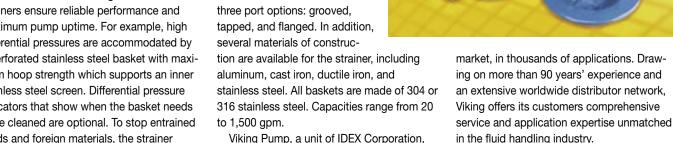
Several features of Viking's Lid-Ease strainers ensure reliable performance and maximum pump uptime. For example, high differential pressures are accommodated by a perforated stainless steel basket with maximum hoop strength which supports an inner stainless steel screen. Differential pressure indicators that show when the basket needs to be cleaned are optional. To stop entrained solids and foreign materials, the strainer basket comes in numerous options from 10 to 100 mesh screens, or no screen (basket

openings 0.188" dia.). The basket can include optional magnetic inserts for trapping ferrous particles. Also, maintenance is made trouble-free by a breech lock lid that enables simple top removal of the basket for cleaning.

Lid-Ease strainers come in three port options: grooved,

designs and manufactures rotary positive displacement pumps for use in every major market, in thousands of applications. Drawing on more than 90 years' experience and an extensive worldwide distributor network, Viking offers its customers comprehensive

Source: Viking Pump Inc.



#### **New Godwin High Head Pumps to Debut at MINExpo**

Godwin Pumps, worldwide manufacturer and supplier of the Dri-Prime automatic self-priming pump, will debut the latest additions to its high head "HL Series" pump range at MINExpo in September. Specifically on display will be the new HL160M 8- x 6-inch (200mm x 150mm) single stage pump, capable of heads to 600 feet (183 meters), flows to 2,000 gallons per minute (126 l/sec), and solids handling to 1 3/8 inches (35mm) in diameter.

The "HL Series" of Dri-Prime pumps is suited particularly to mine and quarry dewatering given its key features - extra high head capabilities in a single stage design for reduced maintenance.

Other pumps on display in the Godwin

Pumps booth at MINExpo will include an 8- x 6-inch (200mm x 150mm) high head diesel Dri-Prime pump featuring a stainless steel construction for high and low pH applications, Godwin's standard CD150M model 6-inch (150mm) high volume diesel Dri-Prime pump, Godwin Heidra hydraulic submersible

pumpends, and Godwin Sub-

Prime electric submersible pumps.

"Visitors to our booth will experience a new

look and approach to the mining market from Godwin," said Marie Holmdal, Director of Marketing, Godwin Pumps. "As part of the company's recent global expansion

strategy, we have developed new materials to target end users and distributors around the world."

During the show, the company will hold daily prize drawings

> for a chance to win a grand prize in addition to other prizes.

With 19 U.S. rental

offices, including regional hubs in Los Angeles, CA, Chicago, IL, Houston, TX, and Charlotte, NC; home offices on two continents; and a network of distributors worldwide, Godwin Pumps maintains a rental fleet of over 5,000 pumps to serve customers in mining as well as construction, industry, and municipalities. Known for its quality, reliability and service, Godwin Pumps offers custom pump fabrication, complete parts inventory, engineering and design expertise, and emergency repairs and service 24 hours a day, 7 days a week.

Source: Godwin Pumps of America, Inc. www.godwinpumps.com



# West Nile Virus and You

National West Nile Virus Info-line
Health Ganada, 1-800-816-7292

Remember twenty years ago when we didn't wear sunscreen? Times have certainly changed. Today, most people wear sunscreen when they expect to be out in the sun because they know the health effects of too much sun. Now, enjoying summer weather also brings with it the risk of West Nile virus and habits are changing once again. The use of insect repellent needs to become part of our outdoor routine, just like sunscreen, to protect ourselves from mosquito bites that may result in infection with West Nile virus.

West Nile virus is mainly transmitted to people through the bite of an infected mosquito. Symptoms range from flu-like to severe and potentially fatal, especially for older people and people with ongoing medical conditions. Anyone, of any age or health status, is at risk for serious health effects from West Nile virus. The chances of being infected with West Nile virus are low, but your risk increases if you don't protect yourself from mosquito bites. The first North American outbreak of West Nile virus was in 1999 in New York City. In 2003, over 1,300 Canadians were infected and became ill due to West Nile virus.

Reducing your risk of West Nile virus though can be as easy as wearing insect repellent with DEET or other approved

ingredients when you go outside. Mosquitoes can bite at any time of the day or night so you need to take precautions when you're in an area where West Nile is active. Other precautions you can take to reduce your risk of getting bitten include wearing a hat and light-coloured clothing with long sleeves and pant legs when going outside. You should also ensure all the screens in your house are hole-free and fit snugly, and eliminate any sources of standing water, the perfect breeding ground for mosquitoes, on your property.

We all know that insect repellent is not like perfume. That's the idea. It is designed to repel mosquitoes and other insects as long as we follow the directions on the package. It should be applied lightly to exposed skin or on top of clothes, and today's repellents are much less smelly than those developed in the past. There is no question that putting on mosquito repellent – and sunscreen, for that matter – is an inconvenience. But both protect us from diseases that can be fatal. It is a small price to pay for good health.

#### SYMPTOMS AND TREATMENT

Many people have heard of West Nile virus and know that it is transmitted through the bite of an infected mosquito. You may not be sure though about what West Nile virus means for your own health. How do you know if you have West Nile virus? What are the symptoms? Can you get really sick from West Nile virus? What is the treatment?

Most people infected with the virus will have no symptoms at all or their symptoms will clear up without them ever realizing they have been infected. Others may develop what can be called a "mild" case of West Nile virus. They have flu-like symptoms, including fever, headache, body aches and fatigue. People in this group may also develop a mild rash or swollen glands. If you have these symptoms during late spring. summer, or early fall, you should contact your doctor, especially if West Nile is active in your area or if you've visited an area where the virus was active.

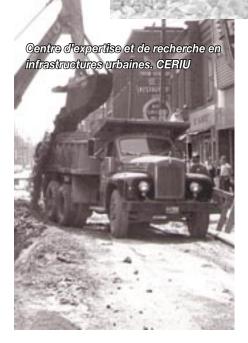
Severe symptoms of West Nile virus in-

clude the onset of meningitis, which is inflammation of the lining of the brain and spinal cord, and encephalitis, which is inflammation of the brain itself. These conditions can be fatal, and symptoms could include the rapid onset of severe headache, high fever, stiff neck, nausea, difficulty swallowing, vomiting, drowsiness, confusion, lack of coordination, muscle weakness, paralysis and loss of consciousness. Hospital care is necessary for people who develop these severe symptoms. There is no specific treatment or medication for these symptoms. Serious cases are treated with supportive therapies to ease symptoms and prevent secondary infections.

Anyone, of any age or health status, can develop these potentially devastating – and sometimes fatal – symptoms. Generally, people with chronic diseases (such as cancer, diabetes, alcoholism, or heart disease), and people with other ongoing medical conditions are at greater risk of developing serious health effects. Risk of serious health effects also increases with age.

Last year, fourteen Canadians died from West Nile virus. Others who get symptoms related to this virus – some young and healthy – have had to deal with severe long-term health effects. That is why it is so important to protect yourself from being bitten by mosquitoes by applying insect repellent and wearing protective clothing when you go outside. Removing sources of standing water like flower pots, pool covers, etc. where mosquitoes breed, from around your home, and ensuring your screens are in good repair will also help to protect you and your family. It is a small price to pay for good health.

## **CERIU Fact Sheets:** "Pipe Ramming"



Fact Sheet NI-04 Trenchless Technologies New Installations Pipe Ramming

#### **DESCRIPTION OF THE TECHNOLOGY**

The pipe ramming technique is used to install prefabricated pipe sections to form a continuous underground pipe without having to excavate along the pipe path.

This technique is used mainly to install a pipe under an obstacle, such as a watercourse, railway line or roadway.

#### **PROCEDURE**

Access pits are dug at each end of the section to be installed. An air hammer is placed on rails, which are positioned along the prescribed alignment and grade, at the bottom of the entrance pit.

Great care should be taken at the outset of the process since the initial alignment and grade is what ultimately defines the slope and alignment of the pipe. Once the installation has begun, it is generally no longer possible to alter the direction of the pipe, except in cases of large-diameter pipes, where a slight modification is possible.

The front portion of the first pipe installed is slightly oversized in order to facilitate the

passage of the pipe.

A jacking ring acts as an interface between the pipe and the hammer in order to ensure that the axial force is distributed evenly across the section.

The pipes are welded and thrust in one at a time, with care taken to weld the joint across its full breadth. Excavated material on the cutting nozzle accumulates in the pipe. At the end of the operation, this material is removed using compressed water or air, or using an auger system, depending on the nature of the soil and on the diameter of the pipe. Large-diameter pipes can be emptied at different intervals.

Access pits may be excavated where manholes are planned to minimize trenching operations.

There are two ways this installation may be carried out:

- 1. The new pipe can be installed directly;
- 2. A first pipe with a larger diameter can be rammed into place to act as a casing for the new pipe. The annular space may subsequently be filled if required.

This second possibility allows a more precise adjustment of the angle of the inside pipe, which can be particularly useful in the case of gravity sewers.

#### **EQUIPMENT**

The pipes used in this procedure are made of steel. They must be sufficiently resistant to withstand the axial compressive stresses caused by the ramming process.

The thickness of the pipe depends on the technical requirements of each project.

If the steel pipe is used as a casing, the pipe inserted into it may be made of different materials.

### APPLICATION TYPES OF PIPES AND STRUCTURES

Culverts and other large-diameter pipes are often installed directly into the soil. In contrast, sewer mains, water mains and gas pipes are generally inserted into a casing.

Pipes that are between 100 mm and 1,500 mm in diameter can be installed by ramming even though some larger diameters have been installed. It should be noted that small-diameter pipes may lack the necessary



rigidity and therefore risk deviating from their trajectories.

### PRELIMINARY AND COMPLEMENTARY WORK

Before any work is started, it is crucial to determine the condition and location of underground structures in the vicinity of the planned trajectory for the new pipe. It is also crucial to identify the characteristics of the soil in order to determine the type of steel wall to be used, the level of power required for pipe ramming and the lubrication needed.

At the outset of a project, it is recommended to start with the pipes to be installed by ramming. The depth of the connecting pipes on either side of the installed section can then be modified slightly, if required, to meet the depth of the pipe installed by ramming.

The same applies to the manholes in the vicinity of the area where the pipe will be installed by ramming. It is recommended to only build them after the ramming work is done, to allow them to match the depths obtained.

In cases where the steel pipe will be the permanent pipe, either it could be made extra thick to combat corrosion or the surfaces that are particularly susceptible to rust could be treated with an epoxy or urethane type

coating with high abrasion resistance.

#### **INSTALLING LATERALS**

A local excavation is required to connect the ends of the new pipes and/or to install house laterals.

#### **CONDITIONS AND LIMITATIONS**

Although this technique makes it possible to bypass obstacles, it has the disadvantage of causing vibrations in the soil.

The direct installation of a gravity sewer may cause problems if the desired grade is shallow, since the profile will not be able to be adjusted during installation.

This technique cannot be used in rock.

Also, the presence of boulders in the soil may cause a deviation in the alignment and grade of the pipe or prevent the the pipe from being installed.

The maximum installation length depends on certain factors, including the diameter of the pipe to be inserted, the soil type, the precision required with respect to matching the profile, the capacity of the hammer, and so forth.

To minimize the need for maintenance with

respect to the receiving pit, it is recommended that it be excavated only after the pipe has been installed.

#### **DEADLINES AND TIMEFRAMES**

A certain amount of lead time may be required if the specific components for a particular application (pipe, lubricant, etc.) are not in stock or if a project specifically requires non-standard products.

The duration of a project always depends on the characteristics of the soil and the amount of follow-up work to be done.

#### **TESTING AND MONITORING**

All routine tests applicable to the type of pipe installed must be conducted.

A micrometer should be used to check the thickness of walls of the steel pipes prior to installation.

Special attention must be paid to verifying the grade and the presence of low points or high points, particularly in the case of sewer mains.

#### STATUS OF THE TECHNOLOGY

The vertical application of this procedure

goes back to the 1920s, when it was used to introduce caisson piles. The horizontal application began in the 1970s in the U.S.S.R., with earth piercing tools. In the 1980s a German company developed the procedure that is in use today.

CERIU assumes no responsability whatsoever concerning the application of the techniques and procedures

described in the present fact sheet.

To obtain the complete collection «CERIU Fact Sheets» you are invited to contact Mrs. Céline Forest by phone at (514) 848-9885 poste 272 at the Centre d'expertise et de recherche en infrastructures urbaines (CERIU).



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## The Total Trenchless Concept: Drilling and Plowing

For the trenchless pipe installation Tracto-Technik produces steerable bore units and the company Föckersperger produces cable plows. Both companies have agreed on a distribution partnership, (www.cableplow-systems.com) because their individual installation systems suitably complement each other. The steerable boring units are preferably used



under hard traffic surfaces and for boring beneath rivers and railways but the pipe and cable plows have advantages in open, rural terrains. Therefore a trenchless combined all round pipe installation is possible. Due to this "drill and plow" partnership attractive "packages" are available toall pipe and cable installation customers.

The partnership has proved itself exemplary for the installation of drinking water pipes on the North Sea Coastline through the Watten Sea from the mainland to the small island of Nordstrandischmoor. As the cable plow from Föckersperger plowed the 225 mm PE pipe at a depth of 1,50 m over a distance of 5 km, the connection with a total length of approximately 800 m to the transfer shaft on the island and on the mainland was carried out using the Grundodrill steerable boring rigs. The Grundodrill bore rigs are capable of installing pipes up to ND 600 trenchlessly over prepared bores of up to 500 m length. In stony grounds they are assisted by an additional percussive hammer, which aids the propulsion and the steerability of the drill head. When the cable plow got jammed in the extremely soft ground approximately 400 m before reaching the target in the sea, the Grundodrill was able to connect the remaining pipe length from a swimming pontoon.

### IDEAL ECONOMICAL SOLUTION FOR THE CONTRACTOR

The cable plow, aided by a cable winch is pulled by a cross-country mobile vehicle (Unimog or crawler driven vehicle). Uneven terrains are smoothed out by adjustable booms on all four sides and hydraulically regulated rubber wheels. In the Watten sea

project the plow moved on specially built skids. The plow knife is placed in position in the starting pit before starting to bore level at the installation depth. Pulled by the cable it then displaces the soil in the installation area and smoothes out, due to it's own weight, down to the pipe trench floor. Due to this a hollow space is created for the new pipe. An automatic

sand wagon, attached directly to the installation plow can be used for filling in the annular space with sand. During the installation the plowed in pipe is placed over the installation



shaft of the plow knife on the trench floor, stress-free, at the required depth. The pipe and cable plow installs PE and PE-X pipes up to OD 225 mm. The "spider-like" legs give the plow a good stability.

The new generation of Föckersperger pipe and cable plows offers with it's new steerable plow shear and the new steerable system a greater flexibility and increased power reserves. For the first time the plow consists of a plow with an integrated cable winch and therefore no longer requires an additional cable winch vehicle. This lowers the prime costs immensely compared to all previous versions.

Source: Tracto-Technik GmbH www.tracto-technik.de

## Association Support Brings Industry Professionals To CONEXPO-CON/AGG 2005 and IFPE 2005

Global support for the CONEXPO-CON/AGG 2005 and IFPE 2005 expositions has reached record levels, with 90 professional groups from around the world to date signing up as "supporting" organizations.

Their participation will bring leaders from all segments of the construction, construction materials and power transmission industries to CONEXPO-CON/AGG 2005 and IFPE 2005. Industry professionals from around the world will gather at the shows with their peers to see the latest products and services available and to take part in targeted, industry-specific education to help grow their businesses.

A combined audience of over 100,000 is anticipated for the events.

Key associations from countries including Australia, Brazil, Canada, China, Germany, Italy, Japan, Mexico, New Zealand, South Korea, Spain and the United Kingdom complement the participation of U.S. trade groups to help bring an audience of decision-makers from around the world to the shows. The support CONEXPO-CON/AGG 2005 and IFPE 2005 receive from groups worldwide helps shape the shows as an international gathering place where attendees can acquire a global perspective on trends and innovations in their industry as well as information on recognized techniques, products and best practices.

For more information on attending or exhibiting at CONEXPO-CON/AGG 2005 or IFPE 2005, visit www.conexpoconagg.com or www.ifpe.com.

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## The Last Gap is Closed in the Millau Viaduct in the South of France



This is the conclusion of an article published in the June/July issue of InfraStructures

On, Friday May 28<sup>th</sup>, the Millau Viaduct in the South of France reached a great historic moment. The last hydraulic launch of a series of 18 launches closed the last gap in the magnificent viaduct, connecting the North and South valley of the river Tarn near Millau in France, creating the most direct and efficient route between Paris and the Mediterranean coast.

After 32 months of construction and 18 hydraulic launches of the steel deck, the

remaining gap is closed. Currently the two decks are being permanently clamped. The official opening of the viaduct is expected in January 2005.

Since the first hydraulic launch of the deck,

February 27th last year, another 17 launches were needed to move the deck the 2,460 meters to bridge the Tarn valley. Each of the 7 piers and 7 temporary piers were equipped with ingenious high-pressure hydraulic launching devises to move the 36.000 tons of steel.

The Millau Viaduct, with its height of 343 meters, is designed by the English architect Lord Norman Foster, now is the highest bridge in the world. The search for an aesthetic construction led Michel Virlogeux to adopt the principle of a multistayed viaduct, consisting of slender soaring pillars and a very light deck, just touching the valley at only seven points.

Eiffage was selected to carry out this project combining the techniques of concrete with those of steel. Enerpac provided the Hydraulic Integrated Solutions to lift the temporary piers, needed for additional stability, and the launching of the steel deck of almost 2,5 km length.



Final Hydraulic Launch Successfully Closes last Gap in the Millau Viaduct in the South of France. The job is done.

#### The Millau Viaduct in Figures: Total length of the deck: 2 460 meters Number of plers: Shortest plers: 77 meters Highest piers: 240 meters Height of the pylons: 87 meters Number of stays: 154 Thickness of the deck: 4,20 meters Width of the deck: 32,05 meters Total volume of concrete: 85 000 m<sup>3</sup> Weight of the metal structure: 36 000 tons

## **Cummins Eastern Canada and Cummins Ontario Join Their Forces**

Cummins Eastern Canada, LP and Cummins Ontario have merged thus becoming the exclusive distributor of Cummins products for Ontario, Quebec and the four Atlantic provinces. The new company operating under the name Cummins Eastern Canada, LP, started up on April 4.

Mike Christodoulou and his team have managed Cummins Eastern Canada nada for almost 4 years. They will oversee the success of the new company which now have thirteen locations throughout Ontario, Quebec and Atlantic Canada. Source: Cummins Eastern Canada, LP



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| VIO35 | 3,500 kg         | 3,350 mm  |
| VIO40 | 4,360 kg         | 3,750 mm  |
| VIO50 | 5,120 kg         | 4,000 mm  |
| VIO75 | 7,950 kg         | 4,700 mm  |
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ViO20



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