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APRIL 2022



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Capital Equipment News is published monthly by Crown Publications

Acting Editor:

Mark Botha
capnews@crown.co.za

Features writer:

Munesu Shoko

Advertising manager:

Elmarie Stonell
elmaries@crown.co.za

Design:

Ano Shumba

Publisher:

Karen Grant

Deputy publisher:

Wilhelm du Plessis

Circulation:

Karen Smith

PO Box 140
Bedfordview 2008
Tel: (011) 622-4770
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CONSTRUCTION INDUSTRY TO REMAIN IN RECOVERY DESPITE FORECASTED GROWTH

By John de Sousa, CFO, GVK-Siya Zama

The construction industry is forecast to grow by 6,2% this year, but will remain in a recovery phase after experiencing a near recession that was exacerbated by Covid-19 and the associated hard lockdown. This is inspiring news for an industry that is expected to have a beneficial impact on employment, while contributing to improved sentiment towards the economy.

Contributing towards this forecast has been improved sentiment in the market, largely due to the government's recent emphasis on growing public-private partnerships and increasing infrastructure spend.

It is however unlikely that there will be an immediate recovery in the domestic construction market as the Covid-19 pandemic starts to ease or in response to government's positive news for the industry.

The positives are clear and that the outlook for the industry and greater economy indicate an upward trajectory.

This will have a ripple effect in the industry as investor sentiment improves, economies open and budgets expand. The next 12 to 18 months will continue to be a period that is focused on attaining normality as the market stabilises after the pandemic. In this time, it can be expected that margins will remain under pressure in the short term. However, in the longer term, they will continue to grow.

GVK-Siya Zama, one of the country's

largest privately held construction companies, has offices nationwide and employs about 1 500 people directly, working closely with communities and subcontractors nationally.

The company has largely been able to mitigate the downward employment trend in the construction industry, in evidence since the heydays of the 2010 FIFA Soccer World Cup period. GVK-Siya Zama is in its fourth consecutive year of growth, despite the near recession and Covid-19 pandemic.

We have been quite fortunate in that we have been able to increase our staff complement and grow our business over the last few years. This has been due to sticking to our values, prioritising a people-centric approach and being adaptable.

As for turnover, GVK-Siya Zama expects growth between 5% and 10% in the next year.

This will be a year of consolidation. A year of trying to work with what we have, not regressing and trying to be sustainable in a difficult business environment.

While government work has been forthcoming, as has been widely noted, it's not as fast as industry players would like it to be.

This has been the case for the last five to seven years and we therefore believe it shouldn't really act as a deterrent in the marketplace for local or foreign investment.

It does, however, appear as if the government is poised to increase its spending on infrastructure, as indicated in the Sona and the National Budget speeches.

There are definite efforts to encourage the private sector to increase investment, and to secure more foreign direct investment in South Africa.

The government has encouraged the private sector to be the key employment driver in the country and increased investment will ensure that this occurs.

Another positive to emerge from the Sona and budget speeches is the increased

focus on private-public partnerships – another indication that the government acknowledges the mutual benefit of this approach for all stakeholders and the economy.

A negative that could however sway investor sentiment towards hesitancy is the overall economic outlook of 2% for the economy, despite the 6,2% projected growth for the construction industry.

At present, there is limited hope of an overall economic uptrend, but there is always a possibility that this could change.

Obviously, our high debt to gross domestic product ratio is also a major burden on the state. And, of course, all these things were before the war in Ukraine. This further illustrates that, as an economy and industry, we cannot always go by the projected numbers because of external factors, but if we do, the industry outlook will continue to be positive, resilient and remain on an upward trend.

Looking ahead to the future, GVK-Siya Zama will look at various emerging opportunities, including PPPs for growth, while aligning itself with its clients at the conceptual stages of projects to get in early and secure work.

There has also been an uptick in enquiries from the private sector, especially from property owners looking to repurpose and remodel office space, as work-from-home practices are likely to remain a factor despite Covid loosening its grip. There are a lot of property vacancies, especially in the central business districts, that landlords will need to deal with.

We also have to try, as an industry, to be more efficient in what we do, as we are one of the most inefficient sectors in the country. This process includes skills transfer and training, a key focus for the year ahead. Our aim is to improve our efficiencies, empower our staff and SMMEs and, in doing so, create growth for all stakeholders in the business.



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For use at mid-sized mines, the SKT105S is much more cost-effective than an articulated dump truck (ADT) in terms of purchase price and after-sales service.



WIDE-BODY DUMP TRUCKS A COST-EFFECTIVE SOLUTION FOR MINING

Complete mining equipment solutions supplier SANY officially launched the SKT90S wide-body dump truck in 2018 to meet the ever-increasing requirements of mining customers in terms of cost reduction. Since then, the SKT90S has been successively delivered to more than 20 countries, including South Africa, Zambia, Zimbabwe and the Democratic Republic of Congo.



Compared with rigid and articulated dump trucks, wide-body dump trucks have the advantages of much lower procurement and maintenance costs, while being easier to maintain.

Compared with rigid and articulated dump trucks, wide-body dump trucks have the advantages of much lower procurement and maintenance costs, while being easier to maintain. Wide-body trucks are perfectly suited for



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The SKT105S wide-body dump truck from SANY.



SANY has devoted itself to creating a cost-effective mining monster and, when compared with its predecessor model and other mining trucks, the SKT105S comes up trumps



For use at mid-sized mines, the SKT105S is much more cost-effective than an articulated dump truck (ADT) in terms of purchase price and after-sales service



The wide-body dump truck is a newcomer on site but its stability, availability and efficiency are better than those of tipper trucks

mines with a haul distance of between 1 and 10 km, and a gradient of less than 30%, or 16.7°. SANY's continuous investment in R&D, long-term client follow-ups and surveys of mining clients have led to the launch of the newest model SKT105S wide-body dump truck in early 2022. It has a

designed service life of eight years, which is on par with rigid dump trucks.

SANY has devoted itself to creating a cost-effective mining monster and, when compared with its predecessor model and other mining trucks, the SKT105S comes up trumps.

SKT105S advantages

A hydro-pneumatic system is applied both at the front and rear suspension of the SKT105S, where tipper trucks are equipped with leaf springs that could break easily. This leads to a reduction of 20% in the truck's failure rate and



Wide-body trucks are perfectly suited for mines with a haul distance of between 1 and 10 km, and a gradient of less than 30%, or 16.7°.

a lifespan exceeding 10 years while vibration isolation efficiency is improved by 30%, so guaranteeing greater riding comfort.

A newly designed welded frame improves both torsional stiffness and overload capacity by 20% while the truck's life expectancy exceeds 10 years as it has passed the bench durability test.

The double-cylinder middle-lifting mechanism improves lifting stability and safety as it avoids rollover and oil leakage caused by front lifting by single-cylinder designs. A high-pressure and large-displacement plunger pump improves lifting efficiency by 30% and enables a single lifting circle in under 20 seconds.

SKT105S versus standard ADT

For use at mid-sized mines, the SKT105S is much more cost-effective than an articulated dump truck (ADT) in terms of purchase price and after-sales service.

The comparison between the SKT105S and an ADT shown in Table 1 results from an analytical model based on the following assumptions: a single-haul distance of 2 km at a coal mine, with a density of 1.6 t/m³; 20 work hours a day for 300 days per annum; an excavator with a 5 m³ bucket used as loading equipment, and standard mine road conditions which include 1 km of 8% continuous uphill in the offload direction.

Case study 1

A large copper mine in the Democratic Republic of Congo has extremely stringent selection criteria for mining equipment. Although the client has faith in SANY's products, they started off by leasing four wide-body trucks on trial in 2020.

Working over 18 hours per day, the SANY wide-body trucks delivered an average availability rate of 90% by virtue of their stable performance. As these trucks keep running, their advantages in terms of improved fuel-efficiency and lower maintenance costs become evident. At the same time, the front hydro-pneumatic suspension, full hydraulic steering and the 10-inch central control screen ensured an improved driving experience.

SANY dispatched a number of mechanics to the working sites, and built a warehouse to store spare parts in order to respond to calls 24/7, so providing professional after-sales service.

Due to the excellent performance delivered by the trucks in the lease, the client eventually purchased 20 units of SKT90S wide-body dump trucks and SY750H excavators for a task of 6-million m³ of excavation per year.

Case study 2

At present, tipper trucks are used at most

mines in Zimbabwe. After purchasing multiple SANY excavators and being satisfied with their performance, the client, a large-scale gold mine in Zimbabwe, purchased 10 wide-body dump trucks while running more than 20 tipper trucks at the mining site.

To provide more value to the client, SANY sent a number of mechanics to provide follow-up training on site and to conduct operation assessments for the client's drivers. At the same time, SANY mechanics also assisted in the building of spare parts warehouses and a scientific spare parts management system to improve warehousing efficiency.

In terms of the performance of SANY's wide-body dump truck, the client found that the stability and availability of the wide-body truck are a huge improvement on those of tipper trucks. Running a SANY wide-body dump truck with a load capacity of 60 t also requires less equipment than required by tipper trucks. This relieves mining traffic congestion on site while simplifying equipment and personnel management.

The wide-body dump truck is a newcomer on site but its stability, availability and efficiency are better than those of tipper trucks. It is also able to do the work of an ADT where mining road conditions allow.

In terms of reliability and lifespan, wide-

Compared with rigid and articulated dump trucks, wide-body dump trucks have the advantages of much lower procurement and maintenance cost.



Table 1: Performance comparison between the SKT105S and an ADT.

Items	ADT	SKT105
Load Capacity (t)	55	76
Load capacity (heaped) (m³)	34	45
Bucket loads per cargo	7	9
Loading time per cargo (min)	4	6
Time to the unloading point (s)	13	13
Load lifting (s)	22	20
Load dropping (s)	25	25
Time to leave the unloading point (s)	8	8
Dump time (min)	1,1	1,1
Time of round trip (min)	17	21
Standby (min)	5	5
Span of one cycle (min)	28	34
Availability	0,9	0,9
Life span of the truck (years)	8	8
Demand for trucks for 8-million m3 of loading per year (units)	42	31

body trucks aren't a match for rigid dump trucks (RDTs) or articulated dump trucks (ADTs), but their unit-price is less than half of that of the RDT or ADT.

When the gradient is less than 30%, the wide-body dump truck could be a replacement for RDTs. When the haul distance is between 5 and 10 km and downhill to offload, the fuel consumption of the wide-body dump truck is about 33

litres per hour.

The cost-effectiveness of products in this highly competitive industry is crucial to the clients. As an emerging product with high cost-effectiveness, the wide-body dump truck is believed to be coming into its own. SANY is more than willing to offer clients pre-sales consultation and to pay on-site visits in order to establish whether the machine is suitable for their mining sites.

Running a SANY wide-body dump truck with a load capacity of 60 t also requires less equipment than required by tipper trucks. This relieves mining traffic congestion on site while simplifying equipment and personnel management.

To help its clients to save cost while they continue their production has always been SANY's mission. SANY wide-body dump trucks could be a much more affordable alternative to using ADTs or RDTs. The company is more than willing to enter into pre-sales consultations with prospective clients who are unsure, to help them make a decision.

A rental option is also available from SANY Rental to further help clients to reduce cost and capital outlay. 🌟



The CX220C crawler excavator by CASE Construction Equipment.

1957

CASE Construction Equipment introduced the first factory-integrated backhoe loader in 1957.

CASE CONSTRUCTION EQUIPMENT CELEBRATES 180TH ANNIVERSARY

CASE Construction Equipment celebrates 180 years of serving construction businesses around the world with effective solutions and aftermarket support.

The history of CASE dates back to 1842, when inventor and entrepreneur Jerome Increase Case founded the Racine Threshing Machine Works in Illinois, USA. It was the beginning of an exciting journey of entrepreneurship, ingenuity and continuous development of practical solutions to the challenges of construction jobsites.

According to Graham Forte, divisional MD of CASE Construction SA, the company has been pioneering technologies and innovations that have changed the industry and earned the trust of construction businesses across the world.

“CASE Construction Equipment introduced the first

factory-integrated backhoe loader in 1957. The more than fifty years of skid steer loader and wheel loader excellence – as well as numerous awards – testify to our expertise and ability for practical innovation,” he says.

The long history of important milestones and this year’s anniversary are testament to CASE’s capacity to evolve with the times, always remaining close to the customer with effective and innovative products and services – including an expanding offer of digital services – that deliver performance, productivity and low total cost of ownership.

Sustainability is in CASE’s DNA and is a key strategic



Project Zeus, the first electric backhoe loader in the construction equipment industry.

QUICK	TAKE
CASE Construction Equipment introduced the first factory-integrated backhoe loader in 1957	
The company broke new ground in sustainable technologies with the introduction of the first selective catalytic reduction (SCR) solution in the industry in 2011	
CASE serves its customers with products manufactured at its factories based in the USA, Brazil, Italy, India and Mexico	
All of the CASE facilities have achieved WCM Bronze or Silver level, delivering consistent high-quality products.	

driver. It extends to all aspects of the company's business, focusing on four key priorities: reducing the carbon footprint of its operations and products; ensuring occupational safety in the

workplace; a circular product life cycle approach to design, and actively involving the CASE people and local communities.

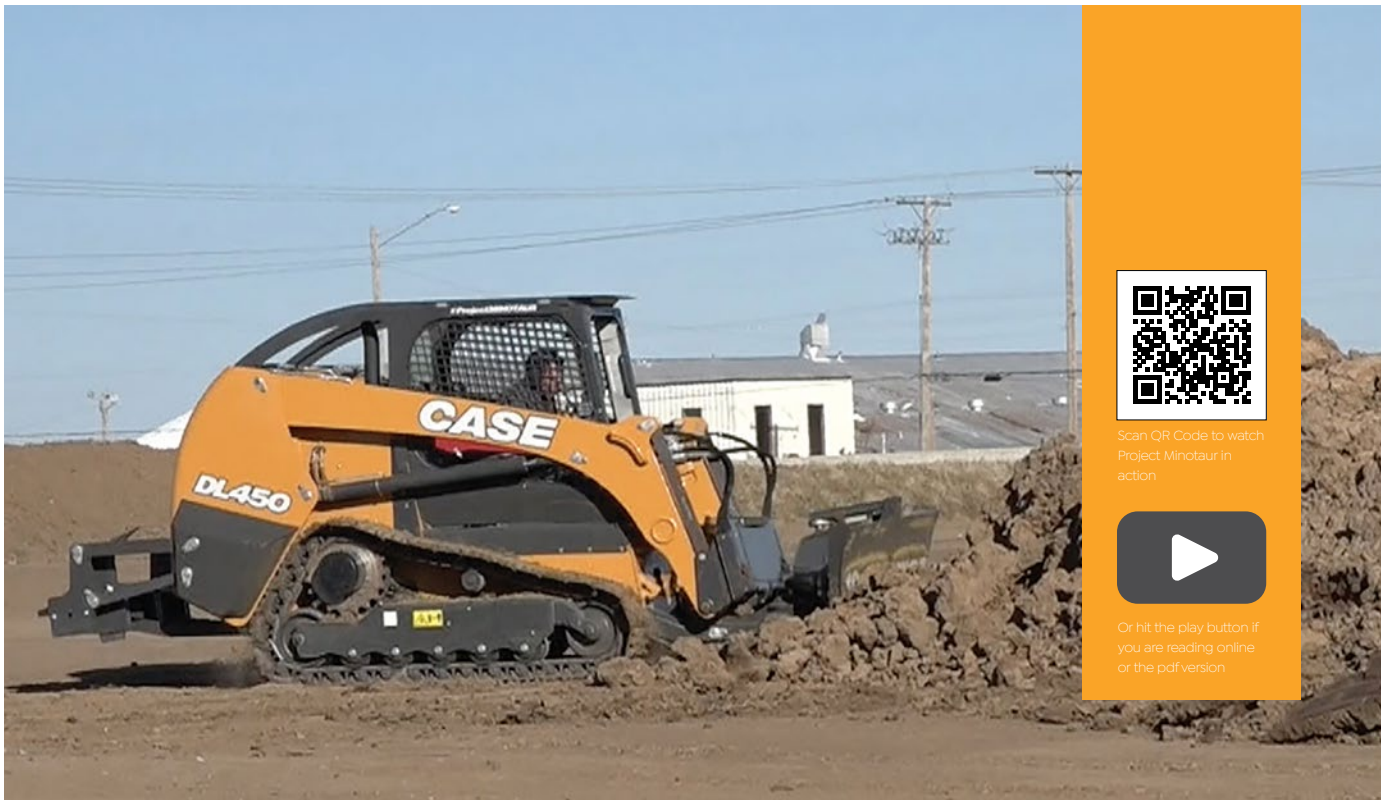
In product development, CASE is

helping customers to reduce their carbon footprint. It broke new ground in sustainable technologies with the introduction of the first selective catalytic reduction (SCR) solution in the industry in 2011 and has remained at the forefront of low-emissions diesel solutions.

The company is also pioneering alternative propulsions with award-winning solutions. The two latest examples of CASE's breakthroughs in sustainable construction are Project Zeus, the first electric backhoe loader in the construction equipment industry, and Project Minotaur, which leverages the footprint of a compact track loader and the blade of a dozer to create a powerful two-in-one machine for grading and loading applications.

Today, CASE serves its customers with products manufactured at its factories based in the USA, Brazil, Italy, India and Mexico. Its plants operate to World Class Manufacturing (WCM) standards, which set a road map to continuous improvement through the elimination of waste, leading to efficient management of the facility and reduced environmental impact.

All of the CASE facilities have achieved WCM Bronze or Silver level, delivering consistent high-quality products. Its widespread dealer network means that CASE dealers are always close to the customers, serving them with the world-class equipment produced at these plants and professional aftersales support with



Scan QR Code to watch Project Minotaur in action



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Project Minotaur, which leverages the footprint of a compact track loader and the blade of a dozer to create a powerful two-in-one machine for grading and loading applications.

TALKING POINT



"CASE has shown that, through our great products and valued customer service, we are able to stand the test of time."

Graham Forte, divisional MD of CASE Construction SA

industry-leading warranties and flexible financing.

CASE will build on this rich legacy, sustainably supporting construction businesses across the world with products and services that deliver practical solutions to their challenges.

"CASE has shown that, through our great products and valued customer service, we are able to stand the test of time," says Forte. "We can't wait for the years to come and look forward to continuing our



CASE has shown that, through our great products and valued customer service, we are able to stand the test of time," says Forte. "We can't wait for the years to come and look forward to continuing our upward growth with the brand within South Africa through our continued customer support.

forklifts. Through its dealership network, customers have access to a professional partner with world-class equipment and aftermarket support, industry-leading warranties and flexible financing.

CASE Construction Equipment is a brand of CNH Industrial N.V., listed on the New York Stock Exchange (NYSE: CNHI) and on the Mercato Telematico Azionario of the Borsa Italiana (MI: CNHI). 🌐

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The New Holland B-Series backhoe loader range is said to have the largest cabs in the industry to offer a comfortable work environment for the operator.

NEW HOLLAND CONSTRUCTION SOUTH AFRICA — PRODUCTS AND SERVICES FOR SPECIFIC APPLICATIONS

New Holland Construction now forms part of a fully-owned CNH Industrial legal entity based in South Africa, which will strengthen the brand's local presence and the customer experience that clients are already used to.

TALKING POINT



"New Holland Construction strives for customer satisfaction and our dealer network is living up to our customers' expectations."

**Wim Farmer, New Holland Construction
Equipment business development
manager**

With the recent acquisition of the brand and taking full operational management of its commercial distribution and aftermarket network, CNH Industrial will strengthen the relationship between the New Holland brand and its customers in the southern Africa market.

New Holland Construction South Africa is a key player in the construction equipment industry. With a well-established dealer network throughout the country, New Holland Construction South Africa is able to provide comprehensive service and technical support to its



The L323 skid steer loader.



CNH Industrial will strengthen the relationship between the New Holland brand and its customers in the southern Africa market



The B-series TLB range boasts a spacious cabin with high visibility, comfort and safety to ensure optimal productivity on site



The new 3,9 litre, 4-cylinder generation S8000 engine was developed by Fiat Powertrain Technologies Industrial



The New Holland patented Super Boom® arm provides more height and unloading reach

diverse customer base throughout the country.

In partnership with a worldwide network of dealers, the company delivers products and services that meet all customer requirements, such as productivity, safety, environmental performance, fuel efficiency and cost effectiveness. The company knows its customers' business, which is why it provides them with a full line of innovative products and services designed for the specific applications of their industry.

Stronger, faster and efficient TLBs

The New Holland B-Series backhoe loader range (B115C, B80B and B90B), known for having the largest cabs in the industry, offers a comfortable working environment for the operator. The B-series TLB range boasts a spacious cabin with high visibility, comfort and safety to ensure optimal productivity on site.

The cab offers excellent visibility to the rear and to the bucket edge. The large, glazed windows and narrow cab pillars put you in command with clear, all-round visibility. There is a good view of the attachment and corners, which improves comfort and worksite safety for greater



The 300 Series Skid Steer Loaders and Compact Track Loaders are available in 60 to 90 HP.



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productivity. All the controls have been specially positioned to offer easy access and faster control.

The inline cylinder backhoe provides high performance in terms of lifting capacity, digging depth and digging force and raises a new standard in this machine segment.

The new generation S8000 engine, developed by Fiat Powertrain Technologies Industrial (FPT Industrial), is a 3,9-litre, 4-cylinder engine that is turbo-charged after cooling with a mechanical injection system. The S8000 provides outstanding performance, such as high torque output with great fuel efficiency.

This TLB range offers safe and easy maintenance points from ground level with best-in-class accessibility providing excellent ground level access to the engine and service points.

New Holland Skid Steer loaders

No matter what your industry, you will do your work more efficiently with the New Holland 300 Series skid steer loader.

The new range of New Holland 300 Series Skid Steer Loaders and Compact Track Loaders (the L313, L323, L325, L318 and L320) delivers on its promise. These 60 to 90 HP gross horsepower skid steer loaders offer unmatched performance and versatility. Whether you're a farmer or a contractor, the new 300 Series skid steer loaders and compact track loaders are designed to support you and your operation.

Providing unmatched dump height and reach, the New Holland patented Super

Boom[®] arm provides more height and unloading reach, allowing the operator to better distribute the load in high-rise trucks or silos, which increases stability.

The skid steer loader cab offers more comfort for the operator ensuring high productivity and efficiency on site. Joysticks are ergonomically designed to place all the commands at the tip of your fingers.

These models offer a choice between an open environment canopy and a fully enclosed cab. The air vents are strategically located, for better thermal distribution inside the cab and quick demisting of the glazed area, when necessary. New Holland knows that comfort is not simply a luxury item, it is essential to your business. An operator, feeling comfortable, works longer hours, with less fatigue. Therefore, we make sure to build additional comfort when designing the 300 Series.

With regard to maintenance, New Holland understands that the machine downtime is a loss of income and that daily maintenance will be well performed if control points are easily accessible.

Although the 300 Series Skid Steer Loaders have been completely redesigned, they honour New Holland's long history in the skid steer loader market, while still maintaining the essential design features that made them so productive. The New Holland heritage: to handle larger loads and move them faster. The 300 Series Skid Steer Loaders provide the best stability and visibility allowing operators to move larger loads and work at a new

level of confidence.

According to Wim Farmer, New Holland Construction Equipment business development manager, "New Holland Construction strives for customer satisfaction and I am proud to say that our dealer network is living up to our customers' and New Holland Construction's expectations. Together we will take our construction products to new heights. Thank you to all our loyal customers and dedicated dealers." 🌟

The new generation S8000 engine, developed by Fiat Powertrain Technologies Industrial (FPT Industrial), is a 3,9-litre, 4-cylinder engine that is turbo-charged after cooling with a mechanical injection system. The S8000 provides outstanding performance, such as high torque output with great fuel efficiency.

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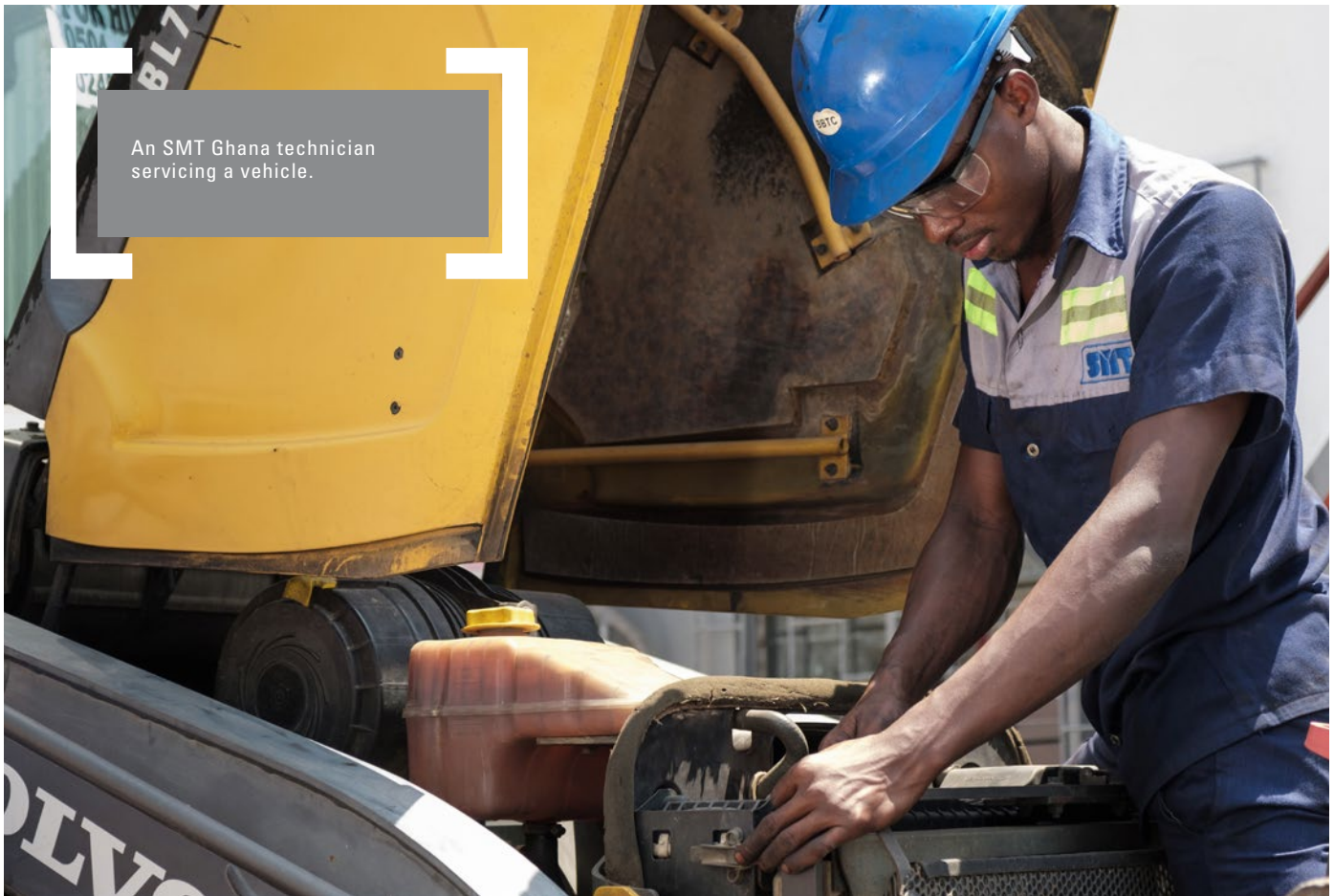
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VOLVO ACTIVECARE BOOSTS UPTIME IN GHANA MINES

Volvo Construction Equipment and dealer SMT Ghana have been piloting the Volvo ActiveCare 24/7 remote machine monitoring service in Africa to deliver new levels of uptime and productivity. Leonardo Aguiar, technical director at SMT Ghana, shares the inside track.

Volvo ActiveCare is a 24/7 remote machinery monitoring and fleet utilisation reporting service that takes the burden of monitoring CareTrack telematics data off the customer. SMT Ghana keeps a constant eye on machine utilisation, performance, and health on behalf of the customer to provide remote diagnosis, and suggests actions for improvement. This enables the dealer to catch any potential issues before they can turn into more serious and expensive problems, as well as boost uptime, productivity, and profitability overall. In a nutshell, ActiveCare makes life easier for the customer – and for the dealer to help them – and gives the customer peace of mind that they are getting the most out of their machines.

Ideal for customers in Ghana

SMT Ghana has mining customers with machines working almost 24 hours a day, so uptime is crucial to their productivity and profitability. While the dealer's on-site technicians do checks every morning for its service contract customers, a lot can happen in a day, and it is costly to the customer to stop machines to investigate every time an alarm or error code pops up. With remote monitoring and diagnosis, SMT Ghana can prioritise whether its technicians need to stop the machine immediately for servicing or can wait until the next scheduled downtime. The dealer can also anticipate any other problems that might occur, so its technicians can be ready with the tools and parts they need to take quick, proactive, preventative action at the next service.

Preparing to deliver the service

Delivering Volvo ActiveCare required some investment and organisation from SMT Ghana as a dealer, but it is worth it. The company appointed a CareTrack manager, Peter Antwi Boasiako, to work exclusively on driving the process. He is responsible for going to the CareTrack portal every day, checking the cases generated and following up on their resolution. He also receives alerts, campaign information, software update information and more from the Volvo Uptime Centre in Sweden.

For service contracts where SMT Ghana has its own technicians based at the customer's site, it will liaise directly with them to plan the interventions, so there is minimal communication with the customer. The customer is not necessarily even aware of everything happening behind the scenes; they just see the results of seamless servicing and high uptime.

For other customers, its service managers will contact the customer when action is needed and ask if they would like SMT Ghana to send its technicians. It requires a mindset shift from these customers to appreciate how preventative and predictive maintenance will lower their costs long-term. In these cases, it is extremely valuable for the dealer to be able to show the customer how much worse damage and costs they will have if they don't stop the machine for servicing.



SMT Ghana site technicians do checks every morning for its service contract customers.

Results

Analysing CareTrack data through Fuel Efficiency Reports has enabled SMT Ghana to support customers to reorganise the number and capacity of machines on site and the routes they take to reduce their idling time and fuel consumption for greater productivity and lower costs. The company has clear figures on this and accesses four Insight Reports in total with ActiveCare: ActiveCare Report, Fuel Efficiency Report, Productivity Report and Summary Report.

Uptime is a more complex measure as it is related to so many things, but ActiveCare undoubtedly has a significant positive impact on the dealer's service processes. Customers tend to notice more when something goes wrong than when everything is running smoothly. So it can be said that, by enabling SMT Ghana to fix issues quicker and prevent others from even happening, ActiveCare contributes to customers' satisfaction.

To give a specific example, the dealer

noticed in the CareTrack portal that one of its service contract customers was experiencing many air pressure filter alarms. SMT Ghana asked its on-site technicians to investigate and found that the filters were getting clogged very quickly, so extra oil bath filters and housing were added to protect them. The company also optimised its process to exchange the entire system with a clean one in a pit stop, so the machines do not have to wait while their filters are cleaned. Issues like this are not critical but, if not treated, can lead to unplanned downtime or failures on the engine or machine. It is clear to SMT Ghana that ActiveCare supports the uptime of machines in the long term.

The future for Volvo ActiveCare in Ghana

Connectivity is a growing trend, not just in Ghana, but across Africa. The dealer's new machines come equipped with CareTrack telematics as standard and it wants to reach close to 100% connectivity

Uptime is a more complex measure as it is related to so many things, but ActiveCare undoubtedly has a significant positive impact on the dealer's service processes. Customers tend to notice more when something goes wrong than when everything is running smoothly. So it can be said that, by enabling SMT Ghana to fix issues quicker and prevent others from even happening, ActiveCare contributes to customers' satisfaction.

from its field population within the next four to five years.

SMT Ghana also offers ActiveCare free of charge for all production plus machines connected with CareTrack. Production plus machines are A40G, A45G and A60H articulated haulers, wheel loaders from the L220H and up, and excavators from the EC480D and up.

Having remote access to machine information helps the dealer to provide quicker and more efficient servicing for customers – and SMT Ghana looks forward to supporting even more customers with ActiveCare so that it can not only fix issues faster, but prevent them from even occurring in the first place. 🛠️



Volvo ActiveCare is a 24/7 remote machinery monitoring and fleet utilisation reporting service that takes the burden of monitoring CareTrack telematics data off the customer



With remote monitoring and diagnosis, SMT Ghana can prioritise whether its technicians need to stop the machine immediately for servicing or can wait until the next scheduled downtime



The customers are not necessarily even aware of everything happening behind the scenes; they just see the results of seamless servicing and high uptime.



It requires a mindset shift from customers to appreciate how preventative and predictive maintenance will lower their costs long term



EMBRACE DIAGNOSTICS TECHNOLOGY TO MAXIMISE PLANT PRODUCTIVITY

Increasing infrastructure and construction needs create a demand for constant innovation in how material is collected and processed. Mines and quarries must stay on the cutting edge to keep up, maximising productivity and profits in a rapidly changing industry. One way producers are doing this is by embracing advanced technology and diagnostics processes. By *Wilm Schulz*, service manager, Haver & Boecker Niagara

Mining and quarrying are deep-rooted businesses. The oldest known mine is located in southern Africa and was active during the Stone Age – some 43 000 years ago. Possibly even more incredible are the ancient mines that are still producing.

Fast forward to today, where we find an industry with a long history now characterised by advanced technology and innovative processes. The product hasn't changed, but increasing infrastructure and construction needs create a demand for constant innovation in how material is collected and processed. Mines and quarries must maximise productivity and profits in a rapidly changing industry.

Predict and optimise digitally

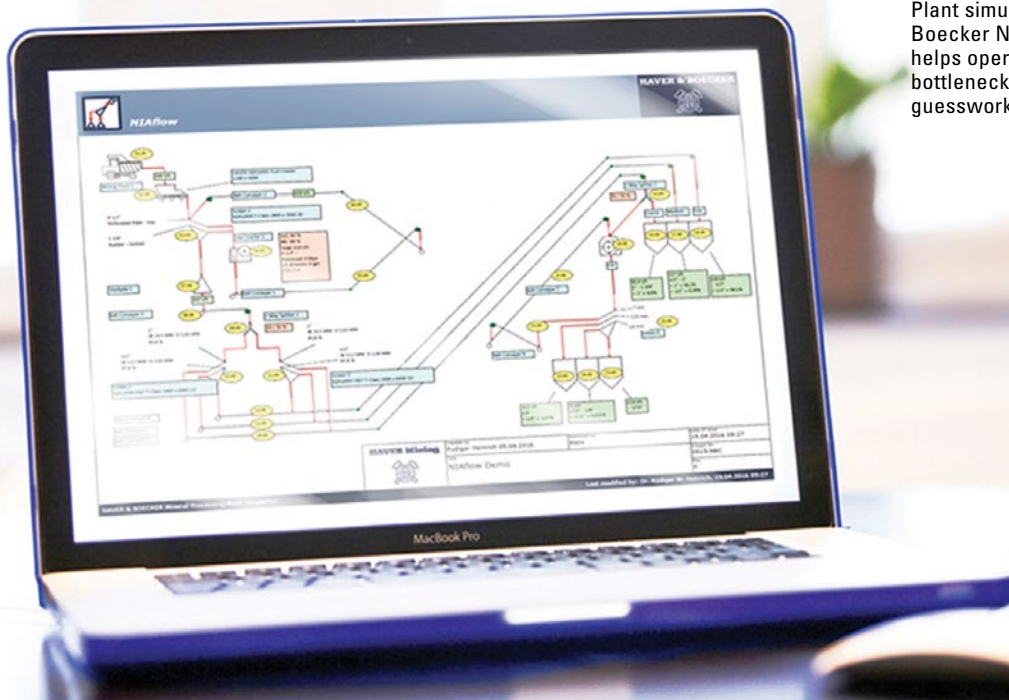
Plant simulation software helps operations to spot and fix bottlenecks and take some of the guesswork out of plant design. This tool provides an overall view of the

efficiency of the entire operation in order to optimise processes and look at opportunities for improvement, both in the case of existing sites and new mines or quarries for all mineral processing applications.

Such programs analyse dozens of different process equipment pieces, from crushers and vibrating screens to material washers and conveyers. Beyond equipment, the systems use scientific-based methods to monitor the operation's input, output and waste piles. Plant simulation software is used by OEMs to diagram plant flow by calculating the mass and volumetric flow rates with machine-specific operating parameters when looking at machine placement. The software is also ideal for product pre-calculations when changing products or production rates, including dry and wet crushing, screening and sorting processes.

While several brands of plant simulation software exist, few are created by equipment OEMs. Software functionality is certainly a critical element, but perhaps

Plant simulation software like Haver & Boecker Niagara's NIAflow, pictured, helps operations to spot and fix bottlenecks and take some of the guesswork out of plant design.



QUICK TAKE

Plant simulation software analyses dozens of different process equipment pieces, from crushers and vibrating screens to material washers and conveyers



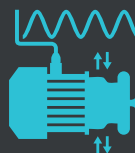
While several brands of plant simulation software exist, few are created by equipment OEMs



Choosing software programmed by an equipment manufacturer allows for the most accurate simulations and enhanced features based on real world application knowledge



Another next-level diagnostics tool is vibration analysis technology for the heart of any processing operation: vibrating screens



Service programmes that include thorough site visits by experienced OEM representatives are essential for choosing the best possible solutions for an operation



Choosing software programmed by an equipment manufacturer allows for the most accurate simulations and enhanced features based on real world application knowledge. Software that includes on-site training further maximises the effectiveness of the program.

more critical is a firm understanding of the equipment and process the software is designed to optimise. Choosing software programmed by an equipment manufacturer allows for the most accurate simulations and enhanced features based on real world application knowledge. Software that includes on-site training further maximises the effectiveness of the program.

Vibration analysis technology

Another next-level diagnostics tool is vibration analysis technology for the heart of any processing operation: vibrating screens. While the crushing equipment is often where the heavy investment lies,



“Plant simulation software helps operations to spot and fix bottlenecks and take some of the guesswork out of plant design.”

Wilm Schulz Haver & Boecker Niagara
service manager



Mines and quarries must maximise productivity and profits. One way producers do this is by embracing advanced technology and diagnostics processes.

the screening equipment is where the money is made, so it's important to make sure the vibrating screens are running as efficiently as possible.

Advanced vibration analysis

systems allow the user to measure the health of a vibrating screen and spot irregularities invisible to the naked eye. This could be a hairline crack in a side plate or side plate twisting that could affect longevity. The ability to catch and address these issues early can mean significant savings in terms of downtime and repair costs as a result of preventing a chain reaction of damage caused by the initial issue.

For example, a damaged spring causing irregularities on a vibrating screen may not be immediately apparent during day-to-day operation but could lead to high costs if not fixed. In one recent case, a British Columbia producer used vibration analysis and the data indicated a problem. This led the operation to discover a broken spring and damage to the vibrating screen's foundation as a result. The producer

saved money by catching and correcting the problem early.

Vibration analysis also allows producers to fine-tune their equipment to maximise performance. Although the technology began with wired sensors, some of today's versions include eight wireless tri-axial sensors that fasten to key areas of a vibrating screen. Measurements from these systems can include orbit, acceleration, deviations and other important data points that indicate the condition of the machine. The sensors transmit the collected information via Wi-Fi to a tablet, allowing the user to stand a safe distance away during the process.

The data can also be sent to an online dashboard to be stored, allowing operations to view historical information and track machine performance. Some manufacturers offer to have their engineers review the data to provide technical insight and recommendations, all without needing to visit the site. On-site inspections can then be scheduled for further examination, if needed.

Hands-on approach

Plant simulation software and vibration analysis are ideal for setup, optimisation and problem-spotting, especially when combined with a hands-on approach.

Service programmes that include thorough site visits by experienced OEM representatives are essential for choosing the best possible solutions for an operation. Some manufacturers offer comprehensive vibrating screen and screen media inspections followed by thorough reports to highlight areas for improved efficiency. These can be complemented by diagnostic services such as vibration analysis or plant simulation.

This type of programme can extend service intervals, improve vibrating screen and periphery equipment performance and save operations money. Inspections can be conducted even while equipment is running so they don't interfere with the flow of the operation.

Following all of this, the OEM can provide knowledge-backed recommendations. For example, production issues caused by blinding and pegging problems could be solved by changing to a different type of screen medium or by blending media depending on its location on the deck. Adding polyurethane wear liners will boost longevity. General maintenance problems may be found that, left unresolved, could cost much more down the line.

Partnering with an OEM for regular check-ups can ensure operations continue to run as efficiently as possible.

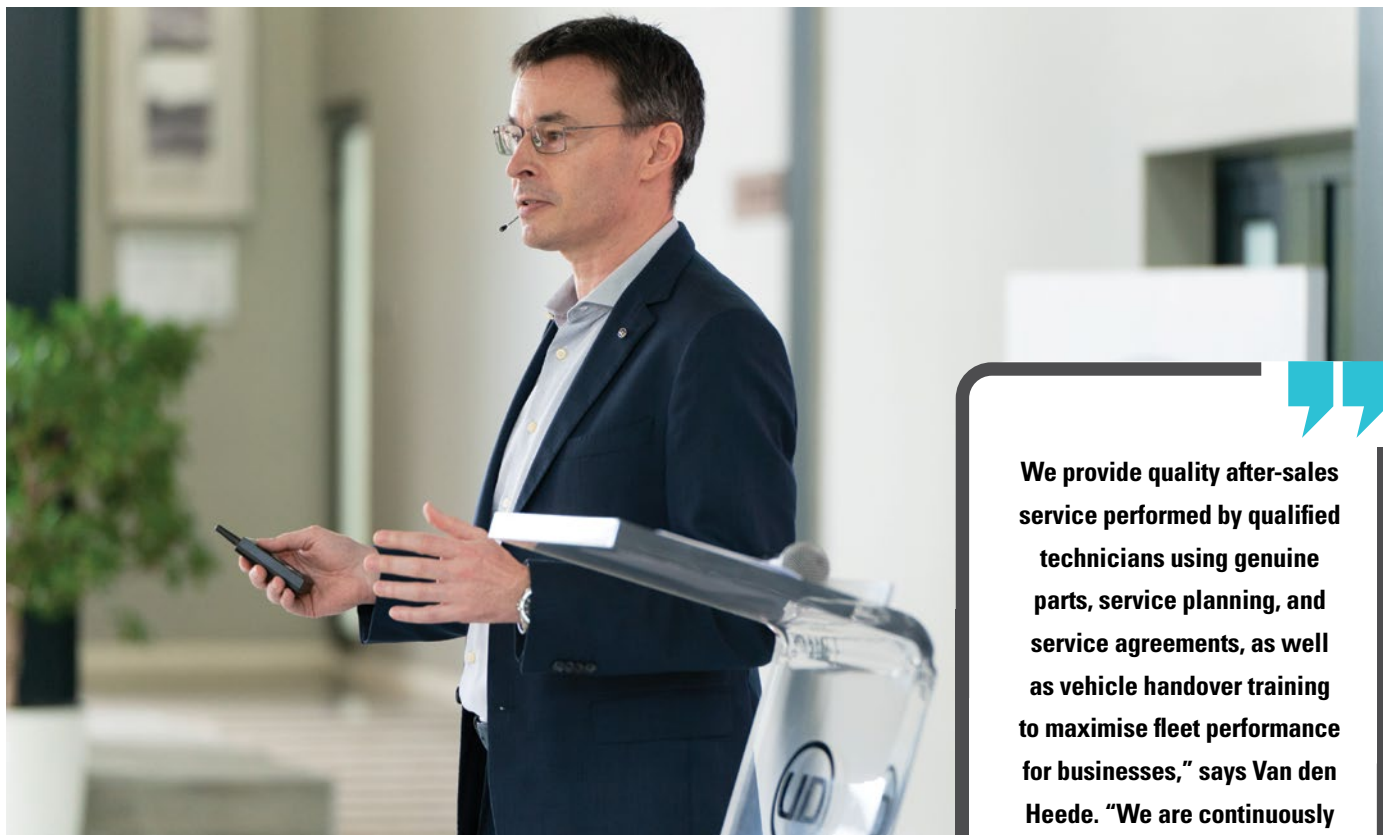
When looking for new equipment, talk to the OEM about warranty programmes that include biannual site visits, equipment inspections, vibration analysis, screen media evaluations and recommendations. Some OEMs will offer warranties for up to three years.

Take advantage of new tech

The mining and aggregates industries aren't moving backwards. Producers need to stay abreast with the newest technologies to maximise uptime and keep up with infrastructure demands, otherwise they risk falling behind.

Innovations such as simulation software and vibration analysis make it easy to gather the information needed to stay ahead. Coupled with evaluations and recommendations from an expert manufacturer, that means more uptime and improvements to the bottom line. 🌟

UD TRUCKS — POSITIVE GROWTH WITH FOCUS ON SUSTAINABILITY



The local transport industry is showing steady signs of recovery from the ongoing global impact of COVID-19. A total of 27 075 trucks and buses were sold during 2021 in South Africa, an increase of 19% compared to previous years.

At a conference held in Fourways recently, UD Trucks Southern Africa MD Filip van den Heede explained that the company took the “downtime” during Covid to re-strategise and increase its lead in market share.

Despite all the unforeseen setbacks, the local transport industry is showing steady growth. It will be a bumpy road ahead of full economic recovery, requiring interventions such as building smarter logistics with lower environmental impact and taking a value-based approach to managing supply chains, says Van den Heede.

Sustainability

With a Better Life purpose, the company will address not only global, but also local environmental challenges. Additionally, COVID-19 will place more focus on

offering a more sustainable response to post-pandemic challenges.

Its long-standing commitment to providing trucks and services has led UD Trucks to introduce Euro 5 trucks ahead of regulations in South Africa. The Euro 5 model range will expand later in 2022 with the addition of two new models.

A Euro 5 system with SCR (selective catalytic reduction) technology has long been a globally proven technology in reducing carbon footprint.

Innovation

Process enhancements such as automation, connectivity and electromobility can help reduce the pressure on logistics. UD Trucks has long invested in Smart Logistics solutions, outfitting its trucks with connected devices and safety features that can analyse data in real time.

ESCOT's automatic gear selection makes driving easy while improving fuel efficiency. As a result of advanced safety features such as the Traffic Eye Brake system, drivers are alerted to potential dan-

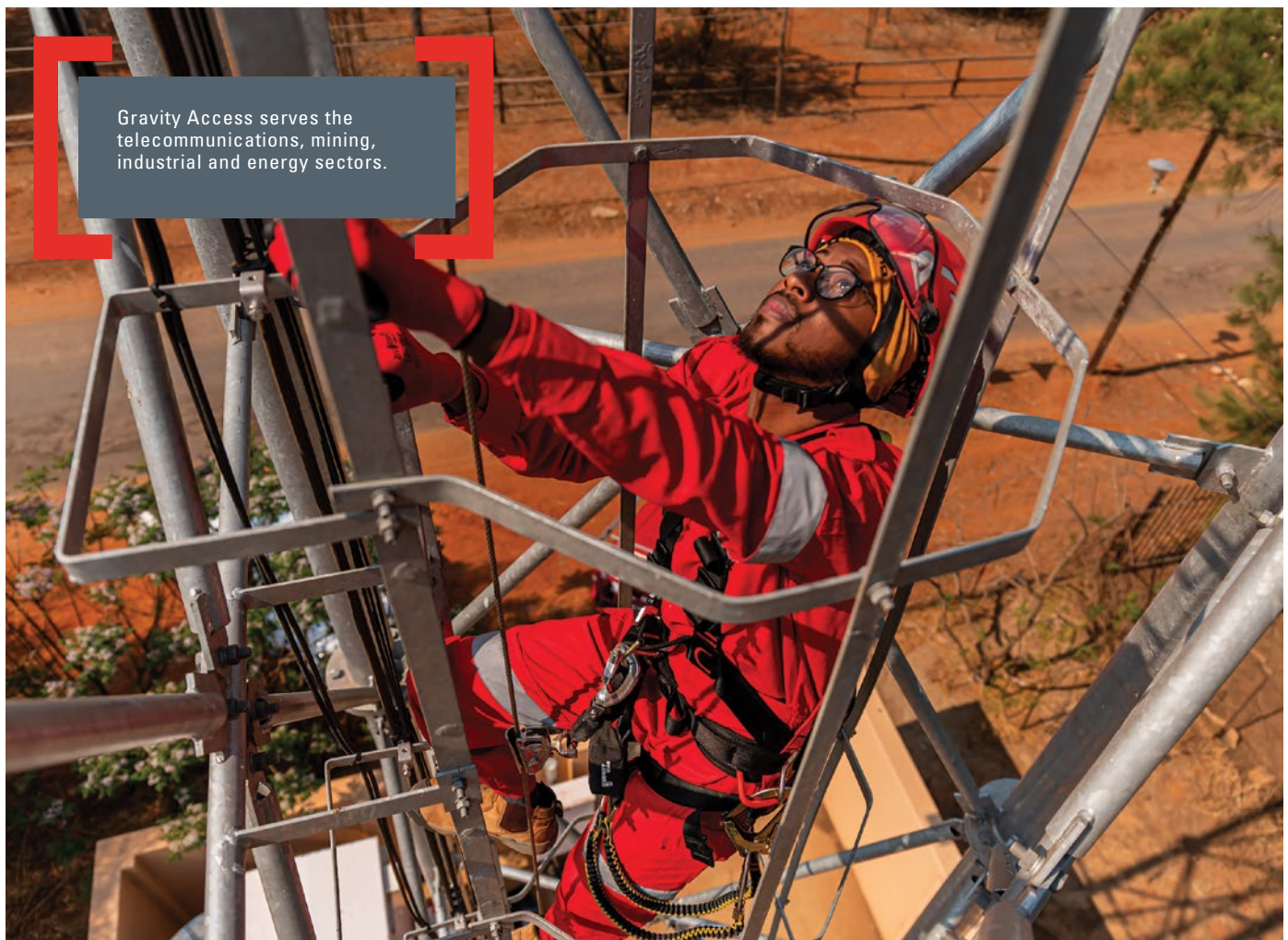
We provide quality after-sales service performed by qualified technicians using genuine parts, service planning, and service agreements, as well as vehicle handover training to maximise fleet performance for businesses,” says Van den Heede. “We are continuously expanding our professional and dense service network by investing in state-of-the-art facilities and retraining our aftermarket support staff.

gers on the road, improving their response times and enhancing overall safety.

Customer experience

The strength of UD Trucks' after-sales support continues to be just as important as the manufacturing of trucks.

“We provide quality after-sales service performed by qualified technicians using genuine parts, service planning, and service agreements, as well as vehicle handover training to maximise fleet performance for businesses,” says Van den Heede. “We are continuously expanding our professional and dense service network by investing in state-of-the-art facilities and retraining our aftermarket support staff.” 🌟



Gravity Access serves the telecommunications, mining, industrial and energy sectors.

CURBING THE OCCUPATIONAL HAZARDS OF WORKING AT HEIGHTS

Falls from height are one of the major causes of injury and deaths in the workplace across industries as diverse as agriculture, construction and entertainment. This feature explores the pros and cons of using mobile elevating work platforms, takes a look at European versus South African legislation in terms of their use and discusses the safety training received by those who work at height. By Mark Botha

Discussing the advantages and disadvantages of mobile elevated work platforms (MEWPs) versus scaffolding, Blaize Wulfsohn, GM: Compliance & Enterprise Risk Management at Eazi Access, says that MEWPs contribute to improved productivity as they provide full control of movement to the person performing the task.

"The MEWP ensures the control of your own work environment. They can be moved and operated by a single person and have a range of safety features. With scaffolding, qualified teams are required to move the scaffold, which could be time consuming and costly."

He says MEWPs allow workers to operate effectively at full height while reducing fatigue as climbing up and down scaffolding is time consuming and can contribute to fatigue.

MEWPs can also be stored easily on site as they are compact, durable and can be stored outdoors, while scaffolding in large quantity occupies large amounts of space to store.

"MEWPs are easily transported, which allows them to be driven around the site and they can be hoisted as one unit onto different work levels. Scaffolding may be expensive to transport and move about, and can only be hoisted in bundles."

Wulfsohn says MEWPs provide a stable, enclosed area for workers to move in and toe boards are permanently in place. Tools can be lifted to height within the basket.

"Scaffolding tools need to be carried up by the workers or pulled up with ropes, which is risky and time consuming. Workers need to hook and unhook lanyards every time there is a need to move."

Johan Vorster, CEO of Evolution Height Safety, says MEWPs form part of fall protection systems as the worker is engaged and can use single shock absorbing lanyards for additional safety.

"Scaffolds depend on fall prevention systems as opposed to fall protection, with a double shock absorbing lanyard, which exposes the worker to a fall while gaining access. Fall prevention is only applicable when the worker has reached a designated platform."



Gravity Access is a work at height specialist providing turnkey work at height solutions.

Workers and operators should have sufficient training, knowledge and experience, and should be appointed by the employer to enable them to identify hazards and to carry out their duties at the level of responsivity assigned to them.

Legislation

When asked whether the use of MEWPs should be legislated in South Africa as is the case in Europe, Wulfsohn points out that the MEWP industry is already regulated in South Africa by the Department of Mineral Resources (DMR) and the NCOP.

Vorster is of the opinion that MEWP use should be legislated (as opposed to regulated) in this country, "as long as annual and bi-annual inspections, user competency certification, pre-use check lists and others are required and complied with to ensure the safe operation of MEWPs."

Combating worker complacency

Wulfsohn says worker complacency and the incorrect use of safety equipment can be prevented when the correct steps are taken during a pre-use planning process. These steps must include risk



International research has found mobile elevated work platforms (MEWPs) to be safer and more effective compared with other methods for work at height



The MEWP industry is regulated in South Africa by the Department of Mineral Resources (DMR) and the NCOP



Worker complacency and the incorrect use of safety equipment can be curbed by way of strictly enforced legislation as to who may or may not make use of equipment



Companies must focus on developing a culture of safety, where top management leads by example

TAKE

QUICK

assessments and supervision, as there are no short cuts to the safe use of MEWPs.

"Workers and operators should have sufficient training, knowledge and experience, and should be appointed by the employer to enable them to identify hazards and to carry out their duties at the level of responsivity assigned to them."

He says ways to reduce the risks of operating a MEWP include planning the MEWP route and selecting the MEWP carefully;

ensuring that familiarisation with safety equipment and protocols is specific; ensuring good ground conditions and visibility at height; minimising distractions; not overriding the MEWP controls or use faulty MEWPs, and rehearsing the rescue procedure.

Jabulani Skhosana, training facilitator and fall protection planner at Evolution Height Safety, suggests continuous training and refresher courses for workers, the appointment of supervisors to ensure

WORK AT HEIGHTS

that all the team members work safely, as well as a fall protection plan induction for all workers at height.

Hein Stapelberg, MD of Gravity Access, says the starting point in preventing complacency is for frontline workers and their supervisors to receive proper training in order to ensure that they are equipped

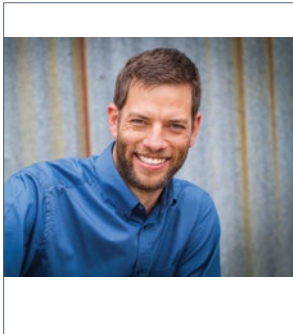
with the necessary skills, knowledge and experience to do their work safely and efficiently.

"To complement this," he says, "companies must then focus on developing a culture of safety, where top management leads by example and clear guidance and safe operating standards are in place, well



"Worker complacency and the incorrect use of safety equipment can be prevented when the correct steps are taken during a pre-use planning process."

Blaize Wulfsohn, GM: Compliance & Enterprise Risk Management at Eazi Access



"IWH recognised training modules are a good start but they are not necessarily enough to curb accidents and falls on their own."

Hein Stapelberg, MD of Gravity Access



"The risk of operating MEWPs is reduced by continuous training and refresher courses for workers."

Jabulani Skhosana, training facilitator and fall protection planner at Evolution Height Safety



"IWH training is sufficient to minimise accidents and falls but the IWH depends on SAQA in terms of the unit standards, which haven't changed for some time."

Johan Vorster, CEO of Evolution Height Safety



Evolution Height Safety offers fall arrest and rope access harnesses and equipment.



A fall arrest harness from Evolution Height Safety.

communicated and integrated into their day-to-day activities.

IWH training

On the question of whether the Institute of Work at Height (IWH) training is sufficient to curb accidents and falls, Wulfsohn explains that the IWH approved training provides trainees with sufficient training and knowledge to assess the risks and safely operate MEWPs, so reducing the likelihood of accidents and falls.

"Curbing accidents and falls therefore relies heavily on operators being properly trained and certified."

He says the training endorsed by the IWH



Gravity Access is a work at height specialist providing turnkey work at height solutions.



Eazi Access' work at height range includes articulated and telescopic diesel boom lifts; electric boom lifts; electric and diesel scissor lifts; compact crawlers, and personnel lifts.



Eazi Access provides a work at height and material handling range of attachments.

is provided according to the South African Qualifications Authority (SAQA) registered programmes which have been benchmarked with international standards.

"All training providers are required to be accredited with the Sector Education and Training Authorities (SETAs) and must conduct the quality assurance of the training and report on it to the relevant SETA," he says. The IWH then issues the person with a License to Operate.

"The IWH is also a SAQA recognised Professional Body and has registered a specific designation for MEWP Operators with SAQA. A designation is basically the person's 'licence to practice'."

Vorster says IWH training is indeed sufficient to minimise accidents and falls but that the IWH is dependent on SAQA in terms of the unit standards, which haven't changed for some time. The IWH, he says, should continuously improve these standards.

According to Stapelberg, the IWH recognised training modules are a good start but they are not necessarily enough to curb

accidents and falls on their own.

"There are other specialist courses with unmatched value, that have been developed over decades, such as those offered by Gravity Training. Once competence has been established, training can be supplemented by quality equipment and safety systems, leading to the creation of a safety-minded ecosystem – a culture of safety. And that is where we repeatedly see real changes in preventing accidents and falls."

Products and solutions

Wulfsohn says Eazi Access offers rental, sales, servicing and training across a range of industries and applications including agriculture; construction; entertainment; heavy industrial; light industrial and mining. The company's work at height range includes articulated and telescopic diesel boom lifts; electric boom lifts; electric and diesel scissor lifts; compact crawlers, and personnel lifts.

"Our material handling range includes telehandlers; pallet trucks; tow tractors; mini cranes, reach trucks and more. We

The IWH is also a SAQA recognised Professional Body and has registered a specific designation for MEWP Operators with SAQA. A designation is basically the person's 'licence to practice'.

also provide a work at height and material handling range of attachments such as buckets, forks, clamps, hooks, platforms and winches, among others."

Vorster says Evolution Height Safety offers fall arrest and rope access harnesses and equipment (work at height kits); temporary and permanent life-lines; self-retractable life-lines (SRLs) and rescue self-retractable life-lines (RSQ-SRLs); steel and concrete anchor points, as well as advanced work at height systems including tripods, A-frames, JIB systems and more.

According to Stapelberg, Gravity Access is a work at height specialist providing turnkey work at height solutions including training, PPE, safety systems and related equipment.

"We serve the telecommunications, mining, industrial and energy sectors," he says. The company's products include fall arrest, rope access and rope rigging kits; mechanical lifting kits and rescue kits among many others. 🌟

The new IVECO S-Way is now available in South Africa.



DRIVING NEW LEVELS OF EFFICIENCY

After its European launch in 2019, the long-awaited IVECO S-Way has finally arrived in South Africa. The new truck range – which comes at a time when local fleet owners face increasing operating costs on the back of record-high fuel prices – notably delivers up to 4% improvement in fuel economy compared with the previous Stralis range. *By Munesu Shoko.*

TALKING POINT



"We have already closed a deal for 150 units in the days leading up to the official launch event on 22 March. The future looks bright."

Elvis Mutseura, product marketing manager at IVECO South Africa

IVECO South Africa has introduced the new S-Way to the local market, replacing the previous Stralis range. Speaking to **Capital Equipment News**, Elvis Mutseura, product marketing manager at IVECO South Africa, notes that the new S-Way is not just a facelift of the previous range, but an entirely new range that forms part of IVECO's new common architecture for

heavy duty trucks.

The global common architecture adopts a modular approach to building trucks to cover a broad range of applications. The S-Way is the on-road variant, while the T-Way is the off-road alternative, targeted at construction and related work. In between the S-Way and the T-Way is the X-Way range, ideally suited to light off-road and on-road missions.

Of note is that the new range has been tailored to take on the challenging South African road conditions, often characterised by more taxing topography than that found in Europe, as well as the requirement for higher gross combination mass (56 t versus a maximum of 44 t in the European Union).

"Consequently, we have combined the best long-haul efficiency of the S-Way and the ruggedness of the X-Way for our South African range. The intention is to make our local units tougher – as they need to be – than the versions running in Europe," says Mutseura.

IVECO South Africa has launched 6x4 truck tractors in three vehicle set-ups: the ON, ON+ and OFF. The ON is for on-road long-haul, while the ON+ is meant for mixed long-haul missions that require some ground clearance and ruggedness, yet still need long-haul efficiency. The OFF features high ground clearance and ruggedness needed for transporting of commodities and agricultural products where the loading and offloading sites can be quite challenging.



The new range was officially launched on 22 March.

The trucks tractors are available with 430 hp/2 100 Nm and 470 hp/2 200 Nm engine options, with the 560 hp/2 500 Nm version still on the way,” says Mutseura. “We also have freight carrier variants available. Although they have not been revealed to the wider market yet, we already have a sizeable order book for them.

“The trucks tractors are available with 430 hp/2 100 Nm and 470 hp/2 200 Nm engine options, with the 560 hp/2 500 Nm version still on the way,” says Mutseura. “We also have freight carrier variants available. Although they have not been revealed to the wider market yet, we already have a sizeable order book for them.”

Since its launch in Europe in 2019, the S-Way has gained strong market share, and based on the initial local interest, Mutseura is confident that the range will gain early traction in South Africa. “In fact, we have already closed a deal for 150 units in the days leading up to the launch event on 22 March. The future looks bright,” he says.

Efficiency to the fore

When designing the new S-Way, IVECO paid



IVECO South Africa has launched the new S-Way to the local market, replacing the famous Stralis range



The new S-Way forms part of IVECO's new common architecture for heavy duty trucks



When designing the new S-Way, IVECO paid special attention to efficiency and reduced total cost of ownership



A combination of features, including the new fuel-efficient engines, a new transmission and a new cab that optimises aerodynamic performance, deliver up to 4% fuel savings than the predecessor range



The new cab combines new levels of aerodynamic performance with productivity-boosting features, enabling fleet operators to save money on operational costs and boost profit margins

**TAKE
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particular attention to fleet owners' ever-increasing need for efficiency and reduced total cost of ownership (TCO). Available local industry data shows that fuel, especially given the current spike in prices, constitutes

up to 50%, if not more, of a long haulage transporter's operating cost. In designing the S-Way, IVECO thus cast the spotlight on this important parameter.

A combination of features, including the new



Some new units at the launch event.

fuel-efficient engines, a new transmission and a new cab that optimises aerodynamic performance, deliver up to 4% fuel savings than the predecessor range.

At the heart of the new truck range's improved fuel economy is IVECO's new Cursor 13 engine, which transitions from the previous unit pump injection to common rail technology, thus providing several performance efficiencies.

This is complemented by the new 12-speed HI-TRONIX automated transmission – based on the latest generation ZF Traxon – with an

electronic clutch for what is said to be the most advanced technology in its category. The transmission improves several performance indicators, including a 10% reduction in shifting time, transmission oil change intervals extended to up to 600 000 km and a rocking function to recover grip for maximum traction when starting off on uneven and challenging surfaces.

Top-class aerodynamics

A major talking point, however, is the new cab, which combines new levels of aerodynamic performance with productivity-boosting features, enabling fleet operators, who already face severe cost pressures, to save money on operational costs and boost profit margins.

Every detail of the S-Way's cab exterior has been carefully considered to minimise air resistance, which plays a critical role in reducing fuel consumption. "The new roof has been integrated into the front end of the vehicle, resulting in a flat surface that reduces drag. In addition, even the retractable front step – which provides easy access to the windshield – completely disappears when not in use," explains Mutseura.

The front grille benefits from high radius corners and side fins and a new bumper design with integrated deflectors which, in combination with the contemporary design of the wheel arches, create flowing lines that optimise air flow.

The vehicle's aerodynamic performance is further enhanced by additional features that reduce drag by closing gaps, including the optimised aerodynamic kit and side skirts with rubber extensions to close the space between tractor and semi-trailer.

The innovative design of the door, which extends all the way down to the second step, creates a smooth surface on the sides of the cab, reducing turbulence at cruising speed. All these elements of the new design work in tandem to achieve a superior aerodynamic performance and deliver significant fuel savings.

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The new cab design provides improved direct visibility for the driver with the one-piece side windows and rear-view mirrors.

More cost savings

Apart from its aerodynamic performance, the new S-Way's new cab further delivers more cost savings through features such as the new multi-piece bumper, which in the case of damage, only requires replacement on the affected piece, instead of changing the whole bumper. According to IVECO's statistics, this will benefit fleet operators significantly in reducing repair costs.

The optional integrated parking cooler further speaks to IVECO's big focus on cost savings. Not only is it more energy efficient than the aftermarket installed alternative,

but it also has no effect on the vehicle's aerodynamic performance.

Safety matters

The importance of safety in the transport industry cannot be reiterated enough. With that in mind, the IVECO S-Way has been developed with a strong focus on the driver. Not only does the focus on the driver increase safety, but it also improves productivity. A safe and comfortable driver has over the years proven to be a productive one.

The new cab – which meets ECE R29.03 crash compliant standards – is reinforced to ensure high levels of passive safety.

Visibility has over the years been proven to optimise safety for the driver and road users alike. Based on that understanding, the S-Way's new cab has been designed to minimise distractions and offer maximum visibility.

"The new cab design provides improved direct visibility for the driver with the one-piece side windows and rear-view mirrors. The IVECO S-WAY also offers full LED lights, which have a sharper beam that carries further, improving visibility and obstacle perception by 15%, further enhancing safety in low-light conditions," concludes Mutseura. 🌟

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GAINING TRACTION

Having entered the small articulated loader (SAL) market for the first time in 2021, Bobcat has received its first orders from Africa, with customer deliveries due soon. Despite the slow uptake in the Middle East and Africa region, John Chattaway, loaders product manager at Bobcat, believes that the SAL range will soon gain traction due to its suitability to the remote and often difficult working environments in Africa. By Munesu Shoko.

As part of its Next is Now programme, Bobcat unveiled its L23 and L28 SAL models in May last year, marking the company's foray into the small articulated loader market. With the arrival of the SAL range, Bobcat says it now has the largest compact loader portfolio of any manufacturer in the world.

Speaking to *Capital Equipment News*, Chattaway says entering the SAL segment has allowed Bobcat to extend its reach in the loader market, thus increasing its offering to customers, as well as business opportunities for the company and its comprehensive dealer network throughout Europe, the Middle East and Africa.

"We have been following the progress of the small articulated loader market closely for some time and we were convinced that the timing was right for our entry into the

market," says Chattaway. "Our aim is to be able to provide the right loader solution for all applications across industries. The SAL range – which complements our mini excavator offering – will particularly be of great benefit to landscaping customers due to its light footprint and heavy material handling capabilities."

Opportunity and applications

Despite the lack of formal industry reporting on the total size of the market, Chattaway tells *Capital Equipment News* that Europe remains the biggest SAL market to date. However, leveraging its extensive dealer network, Bobcat sees great opportunity in both the Middle East and Africa.

"With ease of operation, high lifting capabilities and versatility (provided by a wide range of attachments) being some of the key attributes of the Bobcat SAL range, we see massive opportunities in farming, property maintenance, landscaping, municipalities and light construction work. The range also lends itself to the rental market," says Chattaway.

Due to its light footprint, the Bobcat L28 small articulated loader is ideally suited to landscaping applications.



Following the 2021 launch of the first two units – the L23 and L28 – Chattaway says the initial take-up has been somewhat slow, largely due to the current global supply chain constraints brought about by the COVID-19 pandemic. However, customers that have taken delivery of the new range have expressed great satisfaction, with initial feedback citing Bobcat's drive system as the key talking point.

"The SAL market is well established in Europe and our sales have thus far exceeded our initial forecast," says Chattaway. "We have also received our first orders in Africa, with delivery of these machines due soon. Given the African market's reliance on traditional solutions such as the backhoe loader, we are encouraged by the interest that African customers have shown in a product that is not so common in that market. To further grow the SAL market in Africa and the Middle East, we will – together with our authorised dealer network – embark on a widespread educational campaign to conscientise



The L23's tight-turning articulation joint allows manoeuvrability in confined spaces.



As part of its Next is Now programme, Bobcat unveiled its L23 and L28 small articulated loaders (SALs) in May last year, marking the company's foray into this market segment



Following the 2021 launch, Bobcat has received its first SAL orders from Africa, with customer deliveries due soon



The Bobcat SAL range is ideally suited to farming, property maintenance, landscaping, municipalities and light construction work



Ahead of the arrival of the first SALs in Africa, Bobcat has announced significant developments to its dealer network in Africa

QUICK TAKE

both existing and new customers about the benefits of the Bobcat SAL."

Machines in detail

Powered by simple mechanical diesel engines, the L23 and L28 small articulated loaders are ideally suited to work in remote and often challenging operating environments that the African region is known for. "The in-line mounted, high torque engine is Stage V certified, but

mechanically governed so that it can be used in all regions. The efficient cooling system on the SALs offers improved operation and component protection for class-leading performance," he says.

Bobcat SALs are available in canopy and cab versions, both designed to provide extra space for easy entry, exit and operator comfort. The controls are intuitive for all levels of operator experience and an enclosed cab and heated seat are available



Despite its light weight, the L23 delivers an impressive lifting capacity to maximise productivity.



In addition to its impressive lift capacity, the L28 has a telescoping lift arm that extends the machine's lift height and reach.

for colder climates.

"A simple, intuitive twin-pedal design on the SALs enables quick and easy direction changes: one pedal moves the machine forward, the other puts it into reverse. The travel controls are easy for operators to master, making the SAL a great choice for seasonal employees or rental customers. It is also convenient and simple for operators who need to master controls for multiple machines," explains Chattaway.

In addition to its impressive lift capacity, the L28 has a telescoping lift arm that extends the machine's lift height and reach. It also comes with an innovative dual-cylinder design that keeps the load level as the operator moves the bucket and handles materials at height. The telescopic cylinder is synchronised with a hydraulic levelling link, helping with levelling and preventing spillage over the back of the bucket, thus greatly improving ease-of-use and ultimately productivity.

To ensure the new SALs are truly multi-purpose machines, Bobcat has leveraged the company's expertise in attachments to develop a special version of the proprietary Bob-Tach attachment mounting system, allowing the use of S70/MT55 and S100/S450 approved attachments.

Bobcat SALs achieve minimal ground disturbance through an articulated joint, which enables the rear tyres to match the front tyre path when turning, as well as the turf-safe mode, which limits wheel slippage. "This makes the range the ideal tool for landscaping, construction and maintenance projects where space is at a premium and ground care is of utmost significance," says Chattaway.

Depending on the operating conditions, Bobcat SALs automatically enable one of two traction modes – High-Traction Mode for control over rough and slippery terrain or Turf-Safe Mode for the least possible ground disturbance.

Aftermarket regime

Ahead of the arrival of the first SALs in Africa, Bobcat has announced significant developments to its dealer network in Africa. As part of the changes in southern Africa, the company has confirmed the appointment of Harare-based Machinery Exchange as the authorised dealer for Zimbabwe, effective 1 January 2022. Further dealer announcements for Botswana, Namibia and Zambia will be made soon.

In East Africa, the company has appointed Khartoum-based Albadri Power Co. Ltd

as its new authorised dealer for Sudan, effective 1 January 2022. Bobcat anticipates a new economic era in Sudan following the lifting of sanctions by the United States government in 2020. The development was key to reopening the country's economy to international investment following almost 30 years of economic exclusion. The Bobcat range of equipment is anticipated to play a leading role in the country's reconstruction and infrastructure development efforts.

The Sudanese venture follows the 2020 appointment of Libreville headquartered Sodim TP as the authorised dealer for Gabon, thus further reinforcing Bobcat's footprint in the growth region of East Africa. Sodim TP is a major player in the Gabonese capital equipment market, with a strong footprint in construction and mining equipment, trucks, and agricultural and forestry machinery, among others.

Elsewhere, Bobcat has also reactivated dealer agreements with Rock Plant, Speed Appro, Chanic and CME. With offices in Nairobi, Dar es Salaam and Kampala, Rock Plant is the authorised Bobcat distributor for Kenya, Tanzania and Uganda. Douala-based Speed Appro is responsible for the Cameroonian market, while Chanic, with branches in Kinshasa and Lubumbashi, takes care of the Democratic Republic of Congo, and Tunis-based CME takes charge of Tunisia.

As in most parts of the world, the Covid-19 pandemic has had a massive impact on equipment demand in Africa in the past two years, with the industry declining by 23.6% in 2020, notes Nicolas Dumont, district sales manager – Africa for Doosan Bobcat EMEA. However, with efforts made to reactivate various dealer agreements and to enter new markets, Bobcat had a resilient sales performance in the face of tough market conditions.

"Although sales volumes declined slightly, we managed to grow our market share in 2020. We spent much of 2021 dealing with the ongoing global supply chain issues, including the lack of containers and fewer ships visiting Africa. However, the situation continues to show signs of stability," he says.

Apart from the continued development of its dealer network in Africa, Bobcat has over the past two years reinforced its offering with the introduction of several new products – including backhoe loaders, light compaction equipment and, more recently, the SAL range. While the backhoe loader remains the most prominent piece of equipment in the region, accounting for 67% of the compact equipment industry in Africa, Chattaway is confident that the SAL range will soon find its traction as equipment operators start investigating new and cost-effective ways of executing their jobs. 🌱



ENGAGE INDUSTRY ACROSS AFRICA



Phone: +27 11 622 4770

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Cnr Sovereign Street
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How SA's small businesses can cut costs with telematics

Owning and operating vehicle fleets is part of everyday business for most South African small enterprises. Since transportation doesn't form part of their core business operation, many of these owners find it challenging to optimise their fleets as they are often unaware of how to do so.

However, optimising fleet operations is more straightforward than most small business owners think, and it can help them save money by reducing the cost of operation per vehicle.

"No matter how many vehicles a business operates, an effective telematics solution can provide business leaders with access to and control over their vehicle data, along with the tools and features needed to optimise their vehicle usage," says Justin Manson, sales director at Webfleet Solutions. "As a result, businesses can improve driver behaviour that may damage vehicles, get more jobs completed on time, and encourage fuel-efficient driving."

Telematics is more than just GPS fleet tracking; it provides managers with real-time data by combining software and hardware installed in each vehicle.

The following guide will help you choose the most suitable supplier for your



business.

It is crucial to determine what business goals you want to accomplish before investing in telematics.

Consider ranking the benefits of telematics by importance for your business to help you determine this, including more efficient planning control, higher productivity, reducing costs, or more accurate record-keeping.

Consider taking time to identify colleagues who will use some aspect of the fleet management solution and ask for their input.

Keep your drivers in the loop. They'll be the ones using the system daily, so they must understand the system's benefits.

When reaching out to telematics suppliers, let them know what your priority objectives are, and then ask them to submit a proposal to you regarding the solution they think suits your business best.

Once you've decided on a solution, you can start discussing the terms, conditions, and rates with the supplier. Don't forget to arrange planning, installation, training, and service.

Ensure that you set out everything in a contract, with maintenance, warranty, and security agreements. It's also advisable to reach agreements on data privacy through separate processing agreements.

Renergen chooses DAF to drive LNG revolution

Ahead of commissioning of the first phase of its Virginia Gas Project, Renergen Limited's subsidiary, Tetra4, the holder of South Africa's first and only onshore natural gas and helium production right, has taken delivery of four DAF CF 430 trucks from Babcock.

The Free State-based project is expected to produce its first liquified natural gas (LNG) and helium in May this year. The roughly R1-billion project will produce 50 t of LNG and 350 kg of helium per day at name plate capacity.

The first phase of the project goes live with two main customers who will consume about 60% of the LNG from phase 1, with the remaining 40% destined for the trucking market.

"Key to our buying decision was DAF South Africa's willingness to collaborate with us on the LNG dual fuel project. Although we will retrofit an LNG dual fuel kit, Babcock has agreed to stand by its product in collaboration with the supplier of the dual fuel kits to eliminate any warranty issues and ensure the ongoing maintenance of our trucks," says Nick Mitchell, chief operations officer at Renergen.

Mitchell says there is no silver bullet on the road to sustainability, stressing that all alternatives, including natural gas, electric vehicles and hydrogen, will all have a role to play and must co-exist.

Marius Barnard, MD of Babcock's Transport Solutions business, says sustainability is an integral part of Babcock's environmental, social and governance (ESG) strategy. The Renergen deal reinforces Babcock's commitment to its Plan Zero 40 strategy, which seeks to achieve net zero emissions by 2040.

Barnard says the deal is testimony to Babcock's relationship-building approach to doing business. The company is proactively identifying ways to keep its customers competitive through several initiatives aimed at lowering their total cost of ownership.

"We need to find ways to bring those fuel costs down for our customers by exploring all avenues around alternative drivetrains, including gas and potentially electric," says Barnard.

Alec Jackson, senior sales executive at Babcock Transport Solutions business, says that for the past three-and-a-half years,

Babcock has been supporting a growing fleet of DAF trucks running on compressed natural gas (CNG) in South Africa.

"We have 24 dual fuel trucks in the market. With this solution, a client in Pretoria is saving between R1 and R1,20 per kilometre, which translates to between R10 000 and R14 000 per truck per month."

At the recent 4th annual South African Investment Conference, Renergen committed a further R15-billion for the development of its phase 2 of the Virginia Gas Project. The second phase will produce between 500 t and 600 t of LNG per day, almost 10 to 12 times the size of phase 1.

"We have a proven resource totaling 400-billion cubic feet of LNG (over 11-trillion diesel litre equivalent)," says Mitchell.

He says the quick lead time in the face of current stock shortages in the global trucking market was another key competitive edge for Babcock in securing this deal.

"Supply chain shortages, most notably microchips, have had a devastating effect on the automotive industry. Despite these stock challenges, Babcock was able to meet our delivery timeframes. 🌟

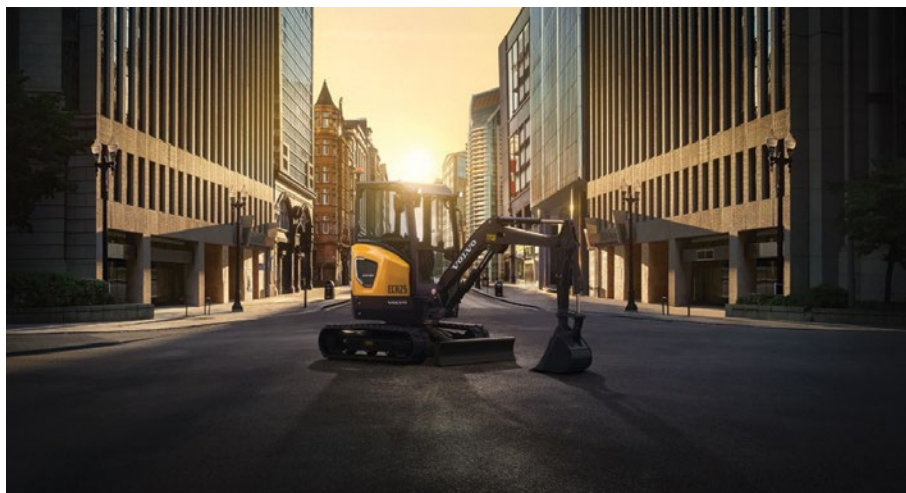
Volvo CE brings its first commercial electric machine to Asia

The zero-emissions, near silent ECR25 Electric excavator by Volvo Construction Equipment (Volvo CE) is now available to order for customers in South Korea – responding to the market's increased focus on more sustainable construction solutions.

The 2.5 t battery electric compact excavator is the first electric machine by a major manufacturer to arrive in the Asian market – launching first in Korea with further roll out planned for China, Japan and Singapore. The demand for electric equipment has been growing across the region, prompted by stronger emission regulations and government incentives.

The Volvo ECR25 Electric excavator has already proved a success in Europe and North America since it was unveiled in 2019. Korea was chosen as the first market for Asia due to its adoption of new technologies and innovative ways of working – as well as its quick response to building an electric charging infrastructure.

The introduction to the Asia market represents the next step in Volvo CE's ambition to move its range of compact excavators and wheel loaders to electric, stopping entirely new diesel engine-based development of these models. As such, the market can



expect more electric compact equipment to be introduced in the future.

The ECR25 Electric excavator comes with an integrated on-board charger allowing customers to charge from 0 to 80% in under six hours. With an optional fast off-board charger (380 V – 420 V three phase), it takes just one hour to charge from 0 to 80%. For the most accurate picture, Volvo dealers can calculate the expected operating time and optimum charging solution based on customers' activities.

It is the ideal solution for customers in Asia looking to meet emission regulations while maintaining the same levels of productivity they have come to expect from its diesel counterpart. Applications range from agriculture and landscaping through to utilities and building – with the added benefit that operators can run the machine in noise sensitive areas and out of standard hours, as well as in low-carbon projects and indoors, without the need for fume extraction systems.

Why Metso's LT220D is a game changer



The popularity of mobile plants which host a crusher and a screen on a single chassis is testament to the benefits they deliver, but the design should not compromise production performance, according to Charl Marais, Pilot Crushtec's sales manager for South Africa.

"The Nordberg® GP220™ cone crusher feeds the three deck screen of 1,524 m by 5,480 m with crusher and screen being optimally matched to ensure high throughput capacity of a single sized product or up to three calibrated end products," says Marais.

Combining both elements on a single chassis through a compact design reduces the number of service parts, lubricants, and moving parts, allowing more uptime and

lower cost of ownership. Using crushers and screens in a train, the maintenance of the engines for each component often doubles the downtime. This leads to an interruption in production and the double handling of material while the other is being serviced.

The versatility of the Metso LT220D has made it a star performer in both construction and mining applications in South Africa. In road building, the units sold locally have produced sub-base material from G1 to G5 categories, as well as aggregates.

"In our South African context, the LT220D unit has achieved G1 production rates of 260 tph, and 300 tph of G4 and G5 material," says Marais. "It has also produced 140 tph

of aggregates, products split into a minus 19 mm, minus 13 mm and minus 6 mm categories. In mining, production rates of 160 tph on average have been achieved, generating a minus 8 mm chrome product."

The screen-first feed configuration means that natural fines and fines generated by the primary crushing stage are removed so that only material which requires crushing reports to the cone crusher. Contributing to its performance and economy is the centrifugal conveyor returning crushed material onto a lifting conveyor to feed the screen. Using centrifugal forces rather than pinching material between two conveyors means less conveyor wear and lower replacement costs. The 1 m wide centrifugal conveyor also supports the high tonnages and ensures there are no limitations on the GP220 cone crusher's throughput.

The compact inline mobile cone crusher and screen combination allows for a smaller plant footprint. This is an advantage, especially as it enhances the high product stockpile heights.

"The benefit of these high stockpiles is that you can reduce the movement of the front-end loaders which conduct the clearing-out function," he says. "Less movement is more economical." 🌀

Liebherr crawler crane LR 1160.1 unplugged

At Liebherr, unplugged stands for battery-powered. The 160 t crawler crane type LR 1160.1 unplugged is the latest model in the series.

The LR 1160.1 unplugged is one of the world's first battery-operated crawler cranes. The electro-hydraulic drive has the same performance specifications as the conventional version. Both versions are operated in the same way.

In idling mode, the sound pressure level of three unplugged cranes, at a distance of 16 m, is equivalent to that of a normal conversation on the jobsite at a distance of 1 m. This corresponds to only 60 dB.

The LR 1160.1 unplugged can be operated with or without cable. Capacity of the battery is designed for eight hours' lifting operation. The crane can be operated without restrictions while plugged into a conventional electric supply with 63 A, or charged within 4,5 hours. Using a 125 A supply, the battery can be fast-charged in only 2,5 hours.

The designers emphasised safety. Just like every crawler crane from Liebherr-Werk Nenzing GmbH, the LR 1160.1 unplugged is equipped with all established assistant systems for safe operation.

The latest feature of the LR 1160.1 unplugged is the Gradient Travel Aid for the safe negotiation of slopes and inclines. The crane's control system automatically calculates the centre of gravity and warns the operator before the crane leaves the safe area. While travelling, the operator receives information about the permissible and actual gradient and the crane's overall centre of gravity. If necessary, the boom angle can be altered so that the machine remains in the safe area. Ground Pressure Visualisation calculates the actual ground pressure of the machine in real time and compares it with the specified safety limits of the jobsite. This means the operator is permanently aware of whether the machine is situated in or is approaching a critical area.

Liebherr-Werk Nenzing GmbH delivered the first three LR 1160.1 unplugged cranes to Great Britain. Select Plant Hire Company Ltd is pursuing the goal of operating more zero-emission construction sites and has planned three further LR 1160.1 unplugged cranes as investment for 2022.

Select already put its trust in the LR 1250.1 unplugged, the world's first battery-powered crawler crane, at the time of its market launch.



Bobcat 500 and 600 series completes loader range for MEA

With the launch of eight new 500 and 600 Series compact loader models, Bobcat is looking to further strengthen its number one position in the Middle East and Africa (MEA) market with a complete portfolio of 15 models. As well as the best-selling S550 and S630 models, the eight new machines include the S510/S530/S570/S590 and S630/S650 skid-steer loaders and the T590 compact track loader.

The new 500 and 600 Series loaders provide operators with increased performance to maximise job site efficiency.

The new S510, S550 and S630 radius lift path loaders combine manoeuvrability in tight areas with the reach and visibility needed for applications such as dumping materials over walls, backfilling or loading flatbed trucks.

The S530, S570, S590, T590 and S650 models feature vertical lift path boom arms suited to lift and carry as well as material-handling applications.

Gaby Rhayem, regional director Middle East and Africa at Doosan Bobcat EMEA, says that, "in the new S510 and S530 models, the compact size is maintained but customers also benefit from the higher torque and performance of a new Interim

Tier 4 engine."

In the new S510 and S530 models, the move to the Kubota V2403 engine meets stricter interim Tier 4 emission regulations compared to the Tier 2 engine in the previous generation machines. In the new S550, S570, S590 and T590 models, power is provided by the Kubota V2607 interim Tier 4 engine. In the new S630 and S650 skid-steer loaders, power continues to be provided by the Kubota V3307 interim Tier 4 engine.

The new engine delivers increased engine torque with lower idle at the same horsepower, so the new S510 and S530 can be dedicated to jobs that demand more power. This further expands their versatility, allowing them to be used with higher flow attachments such as sweepers, planers and wheel saws.

Bobcat has also announced that its S450 skid-steer loader can now be supplied with the Joystick Controls (JC) option which provides the operator with Bobcat-exclusive features and fingertip switches. This automatically configures the loader as a tool carrier for working with the widest possible selection of attachments.

Features incorporated with the JC option include H/ISO operating modes, foot and



hand throttle, speed management, drive response, horsepower management and steering drift compensation.

The new loaders can be equipped with Versatile Duty Tyres, with a bi-directional design for use on most common mixed surfaces. Industrial Solid Flex Tyres are also available.

Finance now available for all John Deere construction and mining machinery

John Deere Financial has announced that it has extended its portfolio to include John Deere Construction and Mining equipment. The John Deere Financial objective is to support customers and their businesses to benefit from tailor-made asset finance. John Deere Financial is built on four key pillars, namely convenience, commitment, competitiveness and insightfulness.

John Deere Financial has a team that is ready and waiting to visit its clients, assess and understand their unique needs, and recommend the most fitting financial solution. With the necessary permission, it is even possible for the John Deere Financial representative to assist in gathering the documents from the accountant or auditor.

In terms of commitment, clients invest in John Deere with the purchase of new John Deere equipment. In return, John Deere Financial wants to contribute to the success of the client and their business. During unpredictable circumstances, John Deere Financial can provide the necessary support by presenting flexible solutions to its clients. John Deere Financial also recognises that business cycles may differ from year to year, which is why the payment date can be extended by a month or two, working with the client's cash flow cycle.

The financial package structure, along with considerations of the term and deposit, means that clients can expect rates as low as prime minus 9%. This low interest rate



means smaller instalments. Competitiveness does not end with interest rates. However, the speed of these services, the type of financial solutions available to clients, and their convenience all add weight. By positioning John Deere Financial as the market leader in the financing of John Deere equipment, the company challenges competitors to continuously improve their service and price, all to the benefit of the clients.

In terms of insightfulness, John Deere Financial continues to grow with clients'

businesses. Through this, the company ensures that its service and solutions remain relevant and sufficient to meet the growing needs of its clients. In the construction environment, John Deere provides custom-designed financial solutions and support with fast approvals. John Deere Financial invites customers based in the construction, mining and quarrying business, as well as farmers interested in purchasing new equipment, to contact their nearest John Deere dealership.

Hyundai adds to growing A-series excavator range

Hyundai Construction Equipment is introducing a further two EU Stage V compliant A-Series crawler excavators, with the launch of the HX160A L and the HX180A L. These mid-weight machines are powered by the latest Cummins diesel engines, achieving Stage V emissions standards without the need for exhaust gas recirculation (EGR). Offering improved fuel consumption, the 16 and 18-tonne models deliver improved operating speed and performance, with increased visibility and safety.

Features include:

- Cummins EU Stage V B4.5 diesel engine delivers 13% increase in power and 27% more torque than previous models
- Up to a 5% improvement in fuel consumption in levelling and truck loading operations in P mode
- Particulate matter (PM) reduction of 60% with no requirement for EGR
- New lifting mode improves fine hydraulic control, using engine rpm reduction, power boost action and pump flow control
- Upgraded electric pump independent control (EPIC) optimises hydraulic pump flow rate and power to match the machine's working conditions. ⚙️



Multotec's RAMA is a giant step in precision sampling

Minerals processing equipment company Multotec now offers unprecedented levels of accuracy for effective plant optimisation.

The company's Realtime Automated Metallurgical Accounting (RAMA™) system delivers significant value by unlocking higher mineral content through improved grade control and recovery, as well as by optimising the consumption of reagents. The system essentially brings three sampling disciplines – metallurgical accounting slurry sampling, sub-sampling, and preparation and analysis – into one solution.

"By integrating our advanced samplers with a sample preparation system that meets metallurgical accounting standards, we can feed online analysers with a fully representative and accurate sample," says Modisaotsile Nyokong, process manager at Multotec. "While analysers can be accurate instruments, they cannot provide meaningful results if they are fed with inaccurate samples."

Nyokong says the RAMA™ online analysis feed preparation system extracts regular and full sample increments from slurry flow streams according to AMIRA P754 metal accounting standards, best practice standard and Theory of Sampling. This eliminates more than 80% of the total sampling error.

"Samples are extracted from the production flow using automated mechanical samplers which are Theory of Sampling (TOS) compliant," he says.

He says process control samplers have

traditionally been used to feed online analysers. However, these primary samplers do not comply with the TOS, with the result that poorly represented samples are analysed with high levels of precision – which is a futile exercise.

"Our advantage with the RAMA™ system lies with feeding representative samples to online analysers, using correct sampler designs," says Nyokong.

Multotec's slurry sample preparation solution prepares and treats each analysis stream in its own line, making it suited to analysers that deal with streams individually – avoiding cross-contamination. Where multiple streams are analysed through the same analyser source and detectors, some cross contamination of streams can occur with different grades or mineral properties – undermining the accuracy of the result.

Over an analyser multi-stream cycle, the RAMA™ system can collect composite samples for each stream, says Willem Slabbert, sampling and magnetics product specialist at Multotec. This means that the analyser does not measure the instantaneous off-take stream 'sample' from the traditional in-line continuous discharge like process control samplers.

"Rather, it measures the performance of each stream through multiple composite samples taken over the 30 minute interval," says Slabbert. "This reduces the grade or quality variability per flow stream."



"RAMA™ is also a cost saving solution, as separate process control samplers are no longer required," he says. "The samplers' purpose in our system is doubled up for both metal accounting and for process control – without the need for any compromise."

RAMA™ is a compact and mobile system which can be readily transported and commissioned. Layout options are available for plants which have primary and secondary sampling with subsequent containerised sample preparation stations, as well as for those with primary sampling only and separate secondary sampling preparation.

"The advantages of the novel combination of sampling global best practices into process control applications will unlock value for both analyser calibration as well as optimal, dynamic process performance," says Slabbert. 🌟

Terex MPS handles a large-scale relocation project in Malaysia

Mount Trusmadi, located in the Trusmadi Forest Reserve, in Sabah, Malaysia, standing at over 2 500 m above sea level, is the new job site for one of the Terex MPS crushers along with other Terex equipment. A recent project for one of the company's customers involved relocating Terex equipment to this location from over 150 km away. The requirement from the customer was that the equipment be moved to this site that needed it post-pandemic. This equipment had been unused for upwards of two years. The durability and quality of the machines shone through as they were relocated with ease.

The equipment was the Wheeled Jaw WJ1175, containing the Primary Jaw Crusher Model Terex JW42, and a Terex Wheeled Cone Model WC1000 containing a Terex TC1000 model Cone Crusher.

The machines were relocated successfully, and with ease. The flexibility which is offered



with Terex MPS Wheeled Plants was the key factor by which the customer could reuse almost all components from the previous site.

"The versatility of our Wheeled Plant was the main reason why the customer chose Terex originally," said Benjamin Tong, regional sales manager for Terex MPS. "The IV Decks screen makes it easy for the customer to cope with the market demand for four different aggregate sizes," he added.

The service support provided by Terex MPS

team was also highly appreciated by the customer, which resulted in a quick turnaround of the plant and in turn production. Now sitting at the top of a new site some 150 km from the old site, overlooking Mount Trusmadi, the Terex MPS systems are working together as one, once again, after years of sitting idly by. The optimisation of the machines, along with their premium quality components, has saved the customer time, labour and overall relocation costs. 🌟

Mining fleets benefit from service centre relocation

Bridgestone Southern Africa (BSAF) has relocated its Bridgestone Mining Solutions store from the Northern Cape town of Portmasburg, to the Kathu mining town in the province.

The store's new site officially launched in March 2022, offering its comprehensive range of Off-The-Road (OTR) Tyre repairs and wheel alignment for passenger vehicles.

It will also now offer 4IR Technologies such as iTrack 2 and Toolbox, digital systems that ensure tyre safety and efficient usage management, on top of traditional tyre fitment offerings, making it the flagship store in the Mining Solutions network.

"This relocation brings us closer to our mining clients in the region, so we can provide them with an enhanced service," says Anton Wessels, commercial sales director at Bridgestone Southern Africa. "OTR tyre repairs require specialised expertise and a very close working relationship with customers. Also, the iTrack 2 is a specialised technology that is a game changer for tyre safety, and ensures the efficient use of tyres."

Bridgestone is also looking to enhance the working environment for employees



and provide a better customer experience. Furthermore, it hopes to increase its service offering to the general public and customers from the mining industry.

The Bridgestone Mining Solutions flagship store in Kathu seeks to be a trusted single-source supplier of integrated tyre management technologies and solutions, all built on a global heritage of off-the-road tyre performance and innovation.

"Over the past year, we saw record demand and prices for gold, platinum, iron ore and even coal, with the industry exceeding

expectations," says Wessels. "With the economy coming out of a global pandemic, we anticipate even more demand, even as economies transition away from fossil fuels. This move will require resources that will come from resource-rich countries like South Africa.

"As our customers in the industry ramp up their production, they will rely on service providers such as Bridgestone to deliver even better service offerings timeously, in order to ensure greater levels of productivity and reduced downtime," Wessels adds. 🌟

Kleemann MOBIREX Impact crusher MR EVO2 now also with SPECTIVE CONNECT

The intuitive operating concept SPECTIVE has now also been extended to the Kleemann mobile impact crushers MOBIREX MR 110/130(i) EVO2 by SPECTIVE CONNECT. All relevant process information and reporting are now displayed on a smartphone.

The impact crushers MOBIREX MR EVO2 are the benchmarks of their class with regard to output and efficiency. The plants impress with flexible application options in natural stone and recycling. Thanks to the operating concept SPECTIVE, control of the new plants has been even easier and very intuitive since 2017.

Diesel and urea fill level, fuel consumption, plant performance, current gap setting and much more important process data can be displayed at any time via the dashboard. In most cases, operators no longer have to leave the driver's cab or interrupt the ongoing process. In case of a malfunction, SPECTIVE CONNECT displays not only a fault but, at the same time, refers to the corresponding components including troubleshooting aids.

The smartphone can be taken to the location of the fault that occurred and support the operator step by step with troubleshooting. SPECTIVE CONNECT generates reports



on consumption and plant performance as well as on plant usage. These reports can be forwarded by messenger or e-mail.

If a fault cannot be eliminated, SPECTIVE CONNECT generates a service report which can be sent by messenger to the person in charge of technology or a Wirtgen Group service centre. All operating hours, fault messages and more are available at a glance and rapid help is possible.

The offline troubleshooting aids make it possible, among others, for a repair technician or service member to support the machine operator remotely because they

can also view the troubleshooting aids. The operator only needs to enter the fault code and the plant type.

The two new functions are available in the offline area and can be used free of charge without hardware.

SPECTIVE CONNECT from Kleemann is available as an option with immediate effect for the impact crusher MOBIREX MR 110/130(i), the jaw crusher MOBICAT MC 110(i) EVO2 and the cone crusher MOBICONE MCO 90(i) EVO2. The app can be installed on iOS and Android smartphones. 🌟

ELECTRIC CONSTRUCTION MACHINES VITAL FOR CLEANER AND GREENER CONSTRUCTION

The supply chain sector, and the adjacent global freight and transport spaces, are complex as well as crucial. A reliable supply chain prefigures a nation's overall economic competitiveness and is a key enabler at the macro-economic level, as most other industries rely on the inflow of various goods. By Dr David Wyatt, technology analyst, IDTechEx

Construction machines are estimated to generate around 400 Mt of CO₂ emission per year, which is around 1,1% of global CO₂ emission. Decarbonisation of non-road mobile machines will therefore be an important factor in efforts to limit global climate change. With an increasing number of countries around the world committing to a net-zero carbon future, the construction industry is facing growing scrutiny of its greenhouse gas emissions.

Leading construction machine OEMs and suppliers are already recognising that powertrain electrification is set to become a key zero-emission technology for construction machines. Many of the largest engine suppliers such as Cummins, Deutz, and Volvo Penta are investing in electromobility research, and several OEMs have already launched battery-electric construction machines as commercial products, including Volvo CE, JCB and Komatsu. The new report from IDTechEx, *Electric Vehicles in Construction 2022 – 2042*, is a deep dive into this nascent market, that highlights technical and economic considerations of powertrain electrification over the diverse range of mobile construction machines and provides a comprehensive inventory of ongoing construction machine electrification projects from around the world.

The starting point for most OEMs will be smaller compact machines, whose duty-cycle requirements are relatively light, meaning the daily workday energy and power requirement can be met with a practical size of li-ion battery, electric motors, and a well-defined charging strategy. Indeed, in recognition of the potential for electrification in this segment, Volvo Construction Equipment has already committed to moving its entire range of compact wheel loaders and compact excavators to electric powertrains,

completely stopping its development of new diesel models. Other OEMs will follow this lead.

However, as excavators over 10-tonnes are responsible for around 46% of the total CO₂ emission by construction vehicles, it is crucial that zero-emission solutions are developed for large machines. The arduous duty cycles of these heavy-duty vehicles mean those over 20-tonnes need more than 300 kWh of energy to deliver a full 8-hour workday. Projects in Norway and the Netherlands have already investigated solutions such as battery swapping, and cable operation, to meet the duty cycle demand. In China, construction machine OEMs XCMG, LiuGong, and SINOMACH have all opted for large battery systems with rapid dual-gun DC fast charging (up to 300 kW).

Estimate of electric mini excavator endurance

Critical to the deployment of electric machines will be the total cost of ownership. There is a premium on electric machines over diesel, primarily related to the cost of the large battery packs. IDTechEx analysis in the report suggests that the extra cost of an electric mini excavator could be modest enough that diesel fuel savings and reduced maintenance could largely offset the additional premium but, for larger machines, the extra cost of electrification likely remains prohibitive, and OEMs will need significant regulatory and financial support to promote uptake.

While GHG emission reduction is key, there are other important drivers for machine electrification, most notably health and safety issues around diesel engine operation on construction sites. The construction industry in the UK is responsible for the largest annual number of occupational cancer cases, with around 8% of these directly related to diesel



Dr David Wyatt, technology analyst, IDTechEx

engine exhaust emissions. Construction is also a high-risk industry for noise-related ill health. Electric machines are significantly quieter, offering the potential for improved communication, safety and productivity on site, while reducing the inconvenience of noise pollution for the surrounding area. The elimination of toxic exhaust emissions could improve air quality on job sites and in the surrounding vicinity, greatly improving the work environment for construction workers.

Given the necessity for zero-emission construction machines, IDTechEx forecasts that in 2042, the global electric construction machine market will be worth \$105-billion (CAGR 25,6%).

To learn more, IDTechEx's new report *Electric Vehicles in Construction 2022 – 2042* analyses ongoing electrification work over the range of construction machine types, including excavators, wheel loaders, cranes and telehandlers. The report provides IDTechEx's independent 20-year outlook for the electric construction vehicle market, with forecasts for sales, battery demand, and market revenue, by machine type, and separate regional forecasts for Europe, China, and the USA.

The electric vehicles in construction report is part of IDTechEx's broader mobility research portfolio, tracking the adoption of electric vehicles, battery trends, autonomy and demand across land, sea, and air. 🌐



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