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SABOA BUS

VEHICLE OF COMMUNICATION OF THE SOUTHERN AFRICAN BUS OPERATORS ASSOCIATION



IVECO BUS

Instinctively

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Steering the industry to safety

TODAY'S buses and coaches feature more inbuilt active and passive safety mechanisms than ever – but the person behind the steering wheel remains the largest risk factor.

Research indicates that more than 80% of accidents are attributable to driver error, while mechanical factors are accountable for just 7% and road conditions play a role in 10%.

Everybody has encountered an erratically weaving driver who slows and slows – only to suddenly rocket off: the hallmark of a distracted cellphone-using driver. Texting while driving on the highway, which defies comprehension, is an all too common sight. It's a phenomenon that's set to escalate as car-makers have launched vehicles which allow drivers access on their dashboards to social networking websites.

As stupid and dangerous as these habits are, the potential for havoc if the cellphone user is behind the wheel of a commercial vehicle is even greater. Unfortunately, distracted truck and bus drivers are a common sight on SA's roads.

The problems are myriad and stretch well beyond distracted driving: it's obvious from the behaviour on the country's roads that many drivers hold no regard for the law at all – aggravated by the quick-fix bribe culture.

The standard of driving on South Africa's roads and the staggering death toll on our roads are a clear signal that we're falling woefully short in the road safety stakes. It's all too easy to become inured to statistics and the suffering

those statistics represent. The official figure on road deaths annually in South Africa is 14 000, but there are convincing arguments that the real figure is far higher – some estimates peg the figure as high as 25 000. Official statistics do not take into account victims who do not succumb immediately. Neither do they reflect the countless lives irreparably altered by accident-inflicted injuries.

SABOA executive manager Eric Cornelius says it's clear that present safety measures are not working. South Africa's ranking among the world's worst in terms of deaths on the roads has to be remedied. It's for this reason SABOA is pushing for the creation of a driver training academy, although what's envisaged is the establishment of standards for the bus and coach sector rather than a centralised bricks and mortar facility. The intention is to create a benchmark for the accreditation of existing facilities to facilitate a consistent level of uniform training throughout the country. As well as setting a standard in place, an added benefit would be the assurance that a driver trained in a remote rural area would be just as proficient as a driver trained in a metropolitan hub.

A paramedic asserts that the scale and intensity of road accidents has escalated over the past decade. Planning, enforcement, accountability and training have to play a role in reversing this trend.

Cindy Haler, Editor



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Iveco Bus: an automatic choice

In addition to the ease Iveco's automatic transmission brings to bus drivers' lives, mounting the transmission remotely provides better weight distribution and simplifies maintenance. Iveco is also confident of a 10 to 15% fuel saving against similarly configured vehicles on the market

IVECO Bus has commenced delivery of the automatic version of its Afriway 4x2, 65-seater commuter bus, with its order book already reflecting 50 units, mirroring the growing demand for automatics.

The automatic builds on the foundation laid at the beginning of the year with Iveco Bus's launch of the manual 4x2, 12,3 metre Afriway bus. The next step – scheduled for February – is the launch of the 6x2, 26-tonne GVM chassis with bodywork, obtainable from the outset in manual or automatic.

Ray Karshagen, head of the Iveco South Africa Works (ISAW) bus division, says that the 100-plus manual Afriway units in the market are delivering very satisfactory performances. "While fuel efficiency results depend on routes and driver behaviour, we're achieving an average of 28 to 30 litres per 100 km which – for an 18-tonne GVM bus – is very good. It's delivering the best fuel efficiency in its class. Some of the vehicles operating over longer distances are giving even better figures.

By Cindy Haler

"Following the launch of the manual transmission Afriway, launched at SABOA's annual conference and exhibition, we've had the official 'OK to Ship' from our engineering division for the automatic variant.

"The availability of a wider product range signals the next chapter for Iveco," continues Karshagen. "So far, enquiries for the automatic exceed those for the manual transmission product, which I think is a sign of things to come. From a driver point of view, in stop-start commuter operations, the automatic is by far the preferred option."

Demonstration units are being tested with various bus operators, with a spread of locations geared to testing on different route profiles. Limpopo, Gauteng, KwaZulu-Natal and the Eastern Cape are among the test sites, with the KZN unit's operation between Durban and the Midlands expected to give a snapshot of performance at sea level and at a higher altitude.

Iveco Bus is also continuing its test and demonstration programme on the manual vehicle with selected operators – with Karshagen noting that demo units are seldom returned. "Each time we demo a bus, we don't get it back: the operator buys it, and adds a few more of the same model to his fleet.

"The manual units we've sold are giving excellent results in terms of cost of ownership: the automatic is going to take the next step in terms of fuel efficiency and total cost of operating the vehicle," asserts Karshagen.

Whereas in the past, an automatic transmission could be 30 to 40% less fuel efficient, Karshagen says the demonstration

units are delivering “what we expected in terms of excellent fuel consumption”. The fuel consumption premium over the same chassis with a manual transmission is probably 7,5 to 10%.

In addition, Karshagen says Iveco is confident that savings of 10 to 15% against competitor products will be achieved.

“The match in the driveline between the Tector 6 engine and the Voith automatic transmission is excellent. The manual transmission with the Tector 6 has proven very fuel efficient and these results are carrying through to the automatic model as well.”

The remote mounting of the transmission facilitates better weight distribution, as well as simplifying access for repairs and maintenance.

While Iveco chassis may be bodied elsewhere, the Iveco Afriway Bus provides a wide array of customisation options, with finishes ranging from basic commuter to semi-luxury. Provision has been made for fitment of air-conditioning.

The same bodywork is being used on the manual and automatic units, with Iveco Bus providing a three-year warranty against corrosion countrywide. Because operators in coastal regions expect a minimum warranty of five years, ISAW is collaborating with other body manufacturers on a corrosion-resistant 3CR12 body on the automatic chassis. Development will be complete by November.

“We’re very aware of the overall weight. We want to ensure that we get the benefit of 3CR12 not just from an anti-corrosion point of view, but also from a weight saving point of view. Because the requisite strength can be attained with a slightly lighter thickness of material, there should be a weight saving, which will enhance fuel consumption and legal payload.”

ISAW will obtain operator feedback to ensure that the product meets their specifications in terms of durability and aesthetics.

Commenting on the next phase of product rollout – the 6x2, 26-tonne chassis with Afriway bodywork – Karshagen says the three-axle chassis configuration is gaining in popularity because of the extra passenger carrying capacity it provides: 80 seated passengers in commuter operation, against the standard 65.

“This configuration may also form the base for later development of articulated-type vehicles,” adds Karshagen.

The vehicle will have the same driveline as the 12,3 metre 4x2 chassis and will be available in manual or automatic transmission on launch. Extra carrying capacity is provided with the addition of a tag axle behind the drive axle (with vehicle design governed by the legislated 10,2 tonne drive axle limit).

The launch in February of the 6x2 marks the completion of the Iveco Afriway Bus front engine product portfolio. Despite the challenges the 10,2 tonne drive axle mass limit imposes on rear engine bus design and the reduced carrying capacity in comparison with front engine vehicles, Karshagen says there is growing demand for rear engine buses, which is being driven by the introduction of BRT systems.





“Passengers are accustomed to riding on the ‘prettier’, European style BRT buses and therefore would also like smarter looking buses for commuter or inner city transport. Where there are feeder buses for BRT systems, the demand is increasingly for rear engine European style city buses.

“That’s the next stage of our product introduction.”

Karshagen is scouting options in areas such as South America and Australia and has pinpointed an Iveco product – chassis and body in a rear entry, low entry style vehicle – for testing.

“We’re investigating various opportunities in the market. That product would probably be introduced in mid-2018, driven by growing demand generated by BRT.”

Whatever the choice, the vehicle will feature a minimum rating of Euro V, which – in addition to being appropriate for inner city operation – is what cities are specifying.

“There is plenty in the pipeline, although we are taking it step by step,” continues Karshagen. “The Iveco engineering culture is that we will thoroughly test and validate before we launch a product on the market. Even if we get a developed product from another country, we would want to do that for South African conditions. Extensive durability testing and the exhaustive validation process ensures that vehicles are ready for the road – and the same procedure will precede every product the bus division launches. This will pay off in the long run.”

Another key advantage Iveco holds is its competitive parts pricing, which reflects Iveco’s strategy of supporting its products in terms of cost of ownership. “Recent comparative parts basket pricing backs Iveco’s claim of lowest cost of ownership,” says Karshagen. “We’re highly competitive and a look at comparative pricing clearly shows the benefit of operating an Iveco product.”

A further point that Karshagen highlights is that Iveco is increasing its market penetration into other bus operators. Although big fleets may be committed to a particular brand – having invested in workshop facilities, parts and artisan training – Iveco is steadily building its track record among operators and Karshagen is confident that the marque’s operating cost performance is creating food for thought.

Once the appropriate 3CR12 body is in place, the demo fleet will be extended. With fuel accounting for about 30% of operating costs, Karshagen says that the fuel savings provided by the lighter bodywork – along with the efficiency of the driveline – could trim operating costs substantially.

Iveco continues to build its cross-border presence, having recently delivered 12 units to Zimbabwe and continuing to rack up sales in Zambia, as well as Namibia. A recent trip to other countries revealed solid prospects and opportunities. “The Afriway is seen as the ideal bus for the operating conditions in Africa,” says Karshagen.

“Iveco is on the move and will keep moving,” he concludes. “We’re making steady inroads.” ■

Driver training standards to tackle grim fatality figures

SABOA is investigating the options on offer to serve as the foundation for establishing standards for the training and testing of bus and coach drivers, in a bid to tackle South Africa's shocking road safety track record

THE fact that more than 14 000 people die on South Africa's roads every year is a clear indication that present safety measures are inadequate and are not working.

Although the Department of Transport campaigns vigorously twice a year, as the country's roads are flooded with Easter and Christmas commuters, in fact statistics for road deaths are consistent throughout the year – there is no December or Easter peak. The fact that road death figures remain appallingly high is an indictment on the efficacy of these twice-a-year initiatives.

South Africa's ranking among the world's worst nations in terms of deaths on the country's roads has to be remedied.

Curbing the mayhem on the roads is the reason SABOA has thrown its weight into efforts to establish a driver training academy. However, Association executive manager Eric Cornelius says the intention is to establish standards for the industry rather than to build a centralised bricks and mortar training facility.

Countries overseas have implemented measures to achieve far superior safety records, says Cornelius, making them a valuable starting point for the study of trends and standards. Those standards could not simply be transplanted to South Africa, so the plan is to devise standards to be implemented here. Existing training facilities would be accredited, facilitating a consistent level of uniform training throughout the country. The board exam for accountants is a guarantee that successful candidates have the skills and knowledge they need for their profession – bus and coach industry standards would provide a similar benchmark.



While operators do invest in training, South Africa's road fatality statistics are a clear signal that more must be done. SABOA is investigating the establishment of a standard against which to accredit training facilities, to facilitate a consistent level of uniform training throughout the country

Cornelius is convinced that synergy with the aviation industry should be explored, with both pilots and bus drivers entrusted with transporting large numbers of passengers. The bus and coach sector would benefit by emulating the stringent standards and requirements that characterise the aviation industry.

Once a standard has been created and set in place, there is potential to extend its reach to other sectors of the transport industry, including taxi and freight.

Driver training standards are only one part of the solution, however. When the idea was first proposed in 2014 at a one-day workshop on driver behaviour and road safety, medical practitioner Dr Kagiso Molefe drew attention to the superficial health checks required for drivers here, compared to their overseas counterparts, to attain or renew professional drivers' permits (PrDPs). Far more is required than simply ticking boxes in response to questions on driver health if PrDPs are to be meaningful.

Testing station capacity is another issue to be addressed, with the constrained capacity of both government and private testing stations resulting in delays.

While collaboration with bodies such as the Department of Transport and Road Traffic Management Corporation would be sought further down the line, SABOA is currently conducting research into what standards could be implemented.

Cornelius emphasises, however, that there is no intention to replace existing training facilities or academies. With the goal of accrediting existing facilities, he adds, there would be scope for organisations to train drivers who were not their employees. "The thinking behind having a uniform standard is that a driver training in a small rural spot will have the same skills and standing as a driver trained in central Gauteng. We want properly trained drivers."

Feet on streets for Scania in fleets

Anders Friberg, Scania South Africa bus and engines GM, has no intention of fixing things that aren't broken – but he does believe there is scope for fine-tuning

SCANIA South Africa bus and engine GM Anders Friberg's 10-year Scania career has primed him for his new role, equipping him with experience of mature bus and coach markets as well as their evolving counterparts in developing nations.

Friberg joins the South African operation after being based in Dar es Salaam for four years as MD of Scania Tanzania. In place since mid-August, Friberg's experience nevertheless gives him the benefit of a rolling start. Chinese marques were the greatest source of competition in Tanzania, but Friberg implemented a strategy of selling solutions, rather than just vehicles. With brands emanating from outside Europe an increasing factor in the South African market, the same emphasis on cost per kilometre and total cost of operation will prevail.

In addition, leveraging the regional structure that Scania South Africa has set in place, to great effect, is another strategy for growth. Each of the five regions is under the responsibility of a GM: enabling decision-making in each region is to foster speedy response to customer needs and requirements – as well as prompt resolution of any issues. There is also a sales manager in each region, to whom the bus key account manager now reports.

"The most important thing is that the business is local," says Friberg. "We have to know our customers and we have to know our customers' customers and their needs. We need feet on the street, and we need to listen to our customers."

Friberg has pinpointed gaps in the bus division's reach and intends plugging those blind spots. With the bulk of bus business generated in Gauteng, the sales force in the region is to be bulked up.

By Cindy Haler



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Friberg is also intent on building up the manufacturer's list of prospects. "If you have a hit rate of 10% and you call on 10 customers, you're going to sell to one customer. I want to have 100 customers – because then you're going to sell to 10 customers instead."

Extending the reach of the bus division's network is one way to generate those additional volumes, believes Friberg, as well as to drive the uptake of the services the division offers. While the size of the South African bus market may be finite, Friberg aims to capture a larger portion of it.

"I am a winner – and my aim is to be the number one bus supplier in South Africa. That said, we don't necessarily have to be number one next year. We have to grow, but we have to do it profitably and smartly. I don't want to rush into things and make sweeping changes. There is an organisation in place and it's working, but there is always room for improvement. I want our customers to say, 'Let's go and talk to Scania – they know.' Then we'll have achieved something."

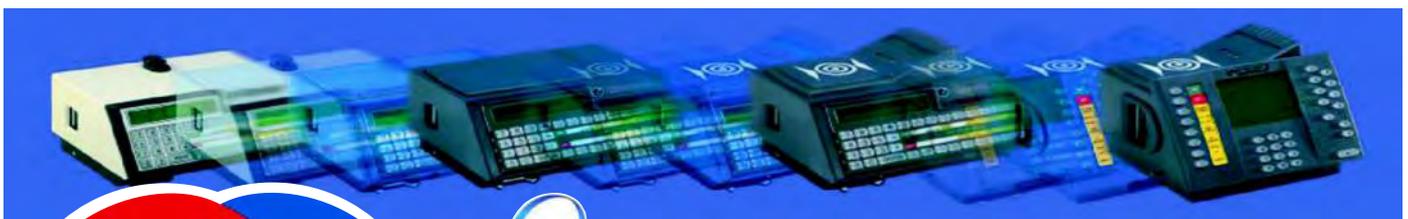
The commuter segment is the one arena Scania is looking to for growth, having attained a solid share of the semilux and luxury segment. Friberg also highlights the excellent cooperation in place between the manufacturer and body builders.

While uptime is crucial for both the bus and truck sectors, Friberg believes it's even more essential for operators transporting passengers to provide uptime and on-time service.

Another strategy he intends emphasising is promising customers more uptime if they entrust more of their servicing to Scania. There is a strong tendency in southern Africa for bus operators to run their own garages, managing maintenance and conducting repairs in-house. However, says Friberg, as vehicles become increasingly sophisticated it is more important than ever to have trained technicians to hand. "I'd like to change the mindset of customers, to give Scania responsibility for service and maintenance so that they can focus on their core business, which is moving people from A to B. We will take care of the bus and ensure that it's up and running."

If customers do their own servicing and maintenance, continues Friberg, there is always the risk that they may unwittingly inflict further damage on vehicles. In this case, there is no history as to what has been done on the vehicle, necessitating troubleshooting to ascertain the cause. This inevitably takes time – and time is money for the customer, as it's downtime. "We can eliminate that," asserts Friberg, adding that another option is to base Scania mechanics on-site with larger customers.

"We're looking to sell more service contracts, taking care of customers' vehicles and uptime so that they can focus on their business. As I've met some of our larger customers, it's become apparent that this hasn't been in their mindset, because they have their own garages and mechanics. However, if we can do it faster and we can do it cheaper, customers benefit from an improved bottom line and increased uptime for vehicles."



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A great strength Friberg has observed is the extensive dealer network Scania has in place throughout sub-Saharan Africa, which provides the safety net of 24/7 service for operators travelling cross-border.

With fuel consuming the largest portion of operators' budgets, Friberg says there is scope for driver training beyond the two days provided on vehicle purchase. Ongoing driver training is essential. "After training, we see fuel consumption drop – but then drivers often slip back into their old patterns. We need to update training continuously."

Scania's Fleet Management System (FMS) is instrumental in this process. The on-board tracking system is invaluable in highlighting fleet vehicles turning in sub-par fuel consumption performances. Friberg has seen driver training yield an 8% bottom line improvement.

While there is a nominal cost to subsequent training, Friberg says that comparing the outlay to benefits tends to make this a very easy calculation.

Friberg also envisages Scania Finance playing an increasingly prominent role as an apparent lack of trust appears to be slowing lending from traditional financial institutions. "If we can provide more solutions ourselves – incorporating both insurance and finance – that's the way forward," he says. "We have to work more closely with our customers to give them a full package."

He also believes that the need for green solutions – of which Scania provides a full spectrum – will increase, although at this stage South Africa lacks adequate infrastructure. In the instances in which Scania has supplied biogas and ethanol vehicles here, clients have had to make provision for fuel and fuelling infrastructure. While lobbying decision-makers is on the cards, Friberg believes it's important to generate awareness of the solutions the company can provide.

Sustainability may be a high level policy matter, but as a key supplier of trucks and buses, Scania takes seriously its responsibility to preserve the environment – and it's important to highlight its capabilities in this arena. Friberg says he has "big plans".

Friberg, born in 1973, hails from southern Sweden. Buses first featured in his professional life when, as a youngster, he took on vacation work at his uncle's bus operation – sparking the notion of becoming a bus driver! Along with bus-cleaning duties though, Friberg also studied economics.

When his professional golfing aspirations proved unattainable, Friberg continued to play golf during the Swedish summers and worked as a ski instructor during the winter months. However, seasonal work had to be shelved as Friberg married and started a family – a 'proper' job was on the cards.

A long-standing interest in the motor industry prompted a move to Stockholm, where he was employed as a commercial director for PSA Peugeot Citroën, responsible for the 73-strong dealer network, dealer development, sales, and interaction with the factory (his introduction to working with vehicle specifications).

As his wife had worked for Scania since 1998, a switch to the OEM was Friberg's next career move. Appointed in September 2007 as Swedish-based area manager for Saudi countries, promotion followed swiftly – in November – to area sales manager for southern Europe. With \$1,1 billion turnover, the position entailed responsibility for volumes as well as product specifications.

This was followed by a move into the market, with his appointment as MD in Tanzania. Friberg relished the challenging posting, cleaning up the organisation's balance sheet and setting measures and controls in place (which entailed creating an all-new management team and radically overhauling the sales force).

While his wife is no longer with Scania, her experience in change management within the organisation has proven to be valuable backup, says Friberg – although his children call him out for discussing business at the kitchen table. "I am a little bit addicted to the brand though. We're a big family – and we encourage our customers to be part of that too. There's a saying at head office in Södertälje, 'We're a big small company.' We take care of one another. I've been to other companies where I've never encountered anything like the Scania feeling of family."

His two children (a 12-year-old son and daughter, 11) are enrolled at the American International School.

Friberg retains his passion for golf and is also an avid tennis player. The children play golf and the family plays tennis together.

Based in South Africa on a three-year contract, with the option of an extension, Friberg's enthusiasm and optimism are infectious. He is no stranger to South Africa, having travelled here every quarter while based in Tanzania, as well as taking family holidays here.

"I love the country. I have never met so many friendly people. I've told my wife that when I retire, I'm going to move here."

While Friberg brings a working knowledge of Swahili to his new posting (gleaned in Dar es Salaam with 110-plus employees whose first language is not English), his excellent English is being supplemented by a growing Afrikaans vocabulary which includes 'baie dankie' and 'lekker braai'.

Robustness, longevity win favour for Wayfarer

The fact that a Wayfarer system purchased four decades ago is still in service was one factor in Golden Arrow's choice of automatic fare collection system

Golden Arrow Bus Services (GABS) has selected Parkeon technology for its automated fare collection system, with the installation comprising 1 250 Wayfarer 200 driver consoles, 62 point of sale units, cashier and dispatching devices, an integrated back office, depot management and administrative software solution.

GABS published a request for proposal for the procurement of an automatic fare collection system in May 2015. As part of its due diligence study, a task team from GABS visited automatic fare collection system manufacturers from many parts of the world and decided on the Parkeon-Wayfarer TGX200 system.

Sagaren Moodley of South African Wayfarer agent eBus Supplies says, "GABS bought a Wayfarer system about 40 years ago which continues to serve them today. Wayfarer products have proven robust and reliable, not only at GABS – many bus operators still continue to use Wayfarer products manufactured about 30 years ago."

GABS public relations manager Bronwen Dyke-Beyer says, "The South African government has a vision to make public transport the heartbeat of the country's economic growth and social development. Our investment in robust and advanced technology developed by Parkeon will help us deliver that vision for the people of Cape Town through current and future ticketing products."

Parkeon Transportation MD Owen Griffith says that the Parkeon-Wayfarer product brand is well established in South Africa, built on a relationship with the country's public transport sector that goes back over 30 years. "We are delighted that Golden Arrow Bus Services has chosen us as its partner and look forward to working closely with the company to ensure it reaps the full benefits that the new technology will bring."

The GABS success follows recent South African project wins for eBus Supplies, says Moodley, including Wayfarer systems at UGU Transport, Great North Transport, Gauteng Coaches, Ikhwezi Bus Service, Dusi Bus Service, and Atamelang Bus Transport.



eBus Supplies is the exclusive agent for Parkeon-Wayfarer automatic fare collection systems in South Africa. It supplies, implements and supports Wayfarer systems in South Africa and neighbouring countries.

Because the functional requirements for automatic fare collection systems in South Africa differ from other countries, eBus customised the Wayfarer system to meet the needs of the local market. "We continue to develop the system to help bus companies further optimise their operation, improve their service to commuters, and provide important information to government," concludes Moodley.

Golden Arrow Bus Services has provided scheduled passenger services in Cape Town for more than 150 years. It operates 1 046 buses during peak hours, serving 1 300 routes covering 2 460 km². The fleet covers nearly 60 million km conveying close to 52 million passengers annually.



Show and tell: Ekurhuleni Metropolitan Municipality saw first-hand how effectively the Fogmaker system suppresses a fire



Fighting fire with Fogmaker

Fogmaker's efficacy and ease of maintenance impressed Ekurhuleni Metropolitan Municipality staff during a recent demonstration

IF A PICTURE is worth a thousand words, then Fogmaker SA's demonstration of its bus engine compartment fire suppression system is worth thousands of words, because it vividly illustrates just how hot engine compartment fires become and how swiftly they escalate.

A diesel spray fire can quickly elevate the temperature in an engine compartment to above 900°C, and escalate from a limited local fire to one creating critical conditions for passengers.

Although there is no legal requirement in South Africa for the fitment of engine compartment fire suppression measures, Fogmaker South Africa MD John Russell believes that this country will follow world trends that are seeing more countries making fitment mandatory.

Fogmaker recently conducted a demonstration of its water mist fire suppression system for the Ekurhuleni Metropolitan Municipality (EMM), which runs a fleet of 7 500 vehicles, 250 of which are buses. Acting head of department Wonder Matshiga says, "It's important to minimise the risk of people being injured in one of our vehicles. It is very important to protect the asset – the bus – but it's even more important to ensure that people are transported safely in our vehicles."

EMM's last financial year saw the loss of a bus to fire damage that was started in the wheel arch of the vehicle, so Matshiga believes that a system should be extended to protect against this type of damage too. He says EMM intends evaluating Fogmaker's offering and comparing it to other options, be they chemical- or water-based to ascertain which will best serve the municipality's needs.

"We will be looking to increase the bus fleet in the new financial year and we will need to make an educated

assessment of the systems and look at installing the approved system during the production process. A retro-fit will have to take place with the current fleet as soon as approval is acquired. The most important consideration is to ensure the safety of the people being transported in our vehicles."

EMM fleet manager Wouter Herselman says that he likes the fact that the system is mechanical rather than digital or electronic. "The creation of fog in engine compartment fires is very effective and I would like to see it extended to wheel arches as well. It's important for us to compare this with other products and evaluate the difference between this and products that use chemicals.

"It's interesting that the maintenance on this system is minimal: this is an important factor that will be taken into account in making decisions going forward."

Workshop maintenance head Riaaz Dawood says that saving lives is paramount, along with any measures to further reduce risk. "We are responsible for moving people – if we can somehow increase the safety of these passengers, then it's very important to look at the system and see if it can be installed in the vehicles.

"It was important to me to note that the system is mandatory in vehicles in Europe: we must not be left behind, we must ensure that our vehicles are up to world standards."

Fogmaker's Russell says that a fire needs a source of heat,



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oxygen and fuel to take hold. The Fogmaker system deploys high pressure water mist which successfully eliminates all three of these elements to extinguish a fire.

Water mist is far more efficient than the traditional foam and powder systems used to fight fire, says Russell: one litre of water expands to 1 700 litres

of steam, forcing oxygen from the engine compartment and killing fire. In the process, the water mist cools the engine compartment very effectively to prevent re-ignition, without the risk of thermal shock associated with flooding with cold water. While a Fogmaker-suppressed engine compartment fire may result in some minor damage, mainly to wiring and hoses, total engine loss, or total asset loss, can be avoided because discharge is so quick and effective.

"The great thing about water mist is that there's no clean-up," continues Russell. "Powder is corrosive and it would take a couple of days to clean the engine. If powder works its way into the air intake, there could be further knock-on effects."

Whereas a conventional fire extinguisher has to be held upright, one of the key advantages of the Fogmaker system is its ability to be mounted at any angle: regardless of orientation and even if a vehicle has overturned, the system will discharge fully. This also means that the system can be installed in out-of-the-way locations, such as in the ceiling of the luggage compartment, to avoid taking up valuable floor space.

Fire detection is totally independent of any electronic sources, which means the system will be triggered even if the ignition is off, or the battery is disconnected.



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Vigia keeps tyre pressure automatically... even with a puncture

VIGIA is an automatic tyre pressure inflation and monitoring system. In the event of a puncture the system will automatically and continuously add pressure to the tyre to ensure that the bus reaches its destination on schedule.

Accident risk is reduced, specifically from blowouts or loss of control from incorrect tyre pressures.

Roadside dangers are avoided: passenger safety is at risk while stopped on the roadside to replace a wheel or waiting for a repair team to arrive.

Roadside repair costs are eliminated. Repairs are especially costly in remote areas and in cross border operations.

There is less reliance on drivers to check tyre pressures. It is difficult to see small pressure differences, so they go unnoticed. The Vigia system will automatically add air as required even after overnight or short stops.

Indications are that improper inflation accounts for 80%

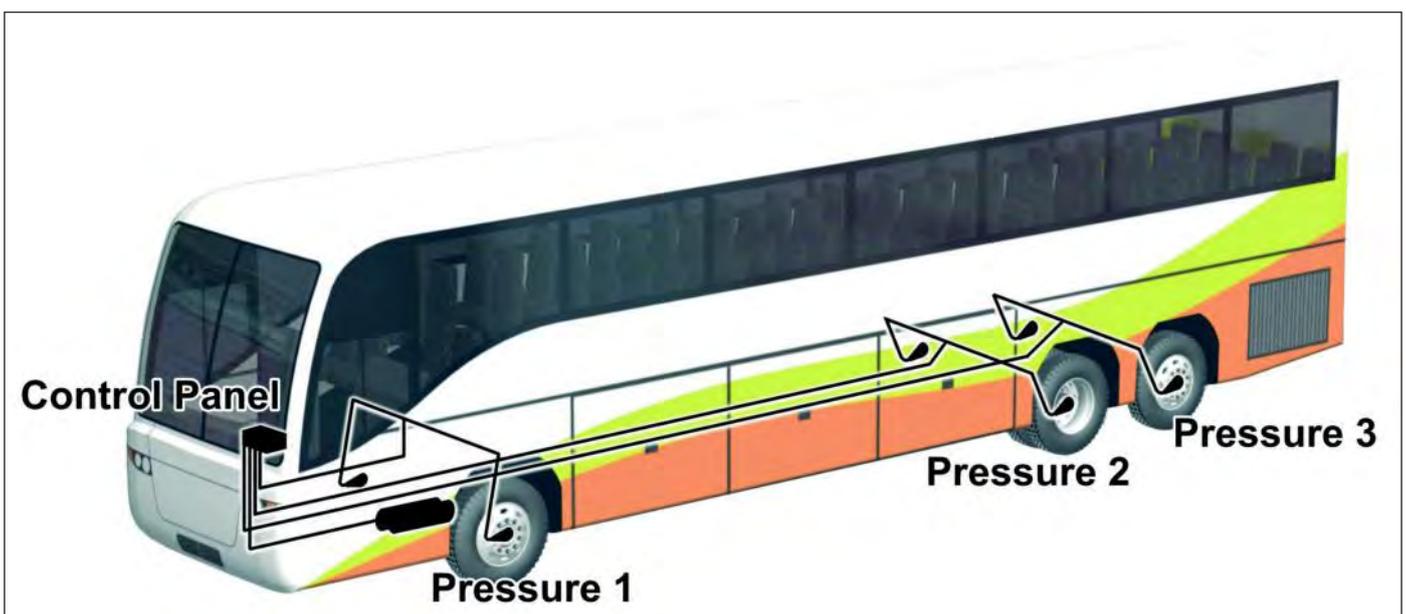
of re-tread separations, cuts, bruises, flats and blowouts. Catastrophic failures are eliminated, ensuring reuse of the tyre casings.

There are direct cost benefits related to operating at the correct pressure. Tyre company testing has indicated that under-inflation of 35 kPa (0,35 bar) will reduce tyre life by 25% and every 7 kPa (0,07 bar) under-inflation can increase fuel consumption by 0,8%.

Each wheel is connected to a central control box via rotary unions and plastic piping. Each tyre retains its Schrader valve so that any damage to the pipes will not cause a tyre to go flat. The control box is supplied with air from the bus's air system.

The required cold tyre pressure is pre-set in the controller. If the pressure drops below the pre-set pressure in any tyre, air will flow into the tyre in an effort to maintain the cold pressure. At the same time, a warning is given to the driver using the cab mounted control instrument.

By John Harrison, Loadtech



SUPPLIERS

A small puncture elicits a warning alarm and the driver knows that he can continue on to a safe place or the next destination. If the air loss is large (blow out), then a different alarm is given indicating to the driver that he needs to stop as soon as possible in a safe place.

As it is possible that a component gets damaged on route, each bus should carry a small stock of components that can be easily replaced, ideally by the driver. A Vigia system failure will not stop the bus from running and can easily be disabled by the driver.

The system is designed to require very little or no maintenance, other than routine visual inspection.

Systems and spares are available from the Loadtech factory in Centurion in Gauteng, with smaller service and



distribution points in KwaZulu-Natal and the Cape. It is advisable for the operator to keep a small stock of spares for immediate repairs. Loadtech can ship countrywide using an overnight courier to most parts of the country. Trained service personnel are available for installations and technical support. The only moving part is the wheel rotor and its expected lifetime is 500 000 km or more. All components are easily replaced or repaired.

One day is required to install and train an operator and driver on the operation of the system. The system can be transferred to new vehicles if required. ■



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Data analysis crucial to fleet management success

Obtaining fleet performance data is not the challenge for fleet management systems, according to Questek Telematics. Instead, operators should be on the lookout for a system capable of procuring useful data to serve as the basis for meaningful analysis, diagnostics, driver training and bottom line benefit

COMMERCIAL vehicle operators are spoiled for choice when it comes to fleet management technology available in South Africa, but Questek Telematics GM Clinton de Bruin says that there is still a misconception that fleet management functionality ends at tracking a dot on a map and monitoring drivers' behaviour. However, there are numerous other facets to the discipline.

De Bruin says Questek Telematics elevates fleet management to a new level with its focus on fleet efficiency, mechanical and predictive diagnostics, safety and analysis of drivers' skills.

In addition to basic fleet management functionality, tracking incidents such as harsh braking, freewheeling, idling, speeding, Questek provides fuel consumption statistics live, over time or for specific areas.

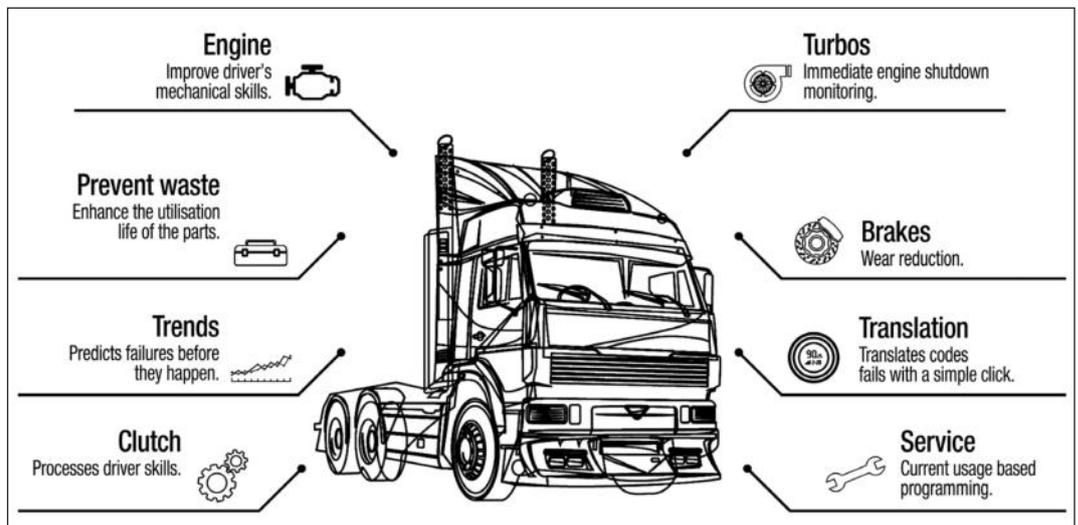
When it comes to driver behaviour, Questek goes the extra mile. For instance, it tracks the extent to which the accelerator is depressed to set the vehicle in motion (with foot-flat acceleration consuming more fuel than depressing the pedal halfway). It analyses how – and if – braking aids such as retarders are used (with retarders playing a



Questek Telematics GM Clinton de Bruin: fleet management promises far greater benefits than simply keeping tabs on vehicles and driver behaviour

crucial role in extending the life of service brakes).

De Bruin asserts that the value of the offering lies in the analysis it provides: while a fleet management system may amass data on harsh braking and acceleration, for instance, the value lies in identifying the problem and its cause, as well as a remedy.



By Cindy Haler

“It’s not really the data that holds the value – the analysis does,” says De Bruin. “What sets Questek Telematics apart is not the amount of data it generates, but the analysis of the data. Operators need not analyse their data: Questek conducts the analysis and presents the outcome to the operator.”

Questek Telematics will visit customers and identify their ‘pain points’ or problem areas – such as brakes or turbos – then set up a scheme to report on that focus area, eliminating the need for the operator to sift through mountains of data.

One danger that De Bruin has encountered with fleet management systems is that the sheer volume of information delivered to the fleet operator can derail a project: because the prospect of analysing data amassed becomes too daunting, systems may instead fall into disuse.

The reports Questek generates serve as a basis for driver education and rehabilitation to rectify problem behaviour, continues De Bruin, rather than resorting to dismissing errant drivers. Drivers tend to modify their behaviour promptly, because they know what they’re doing wrong and also that they are being monitored.

While tracking functionality is one component in Questek Telematics’ offering, De Bruin also highlights the fact that there are several other equally important elements in the product portfolio. These include fleet management, profiling, fuel usage, fleet utilisation, and investigation.

Beyond straightforward vehicle tracking, Questek enables analysis of vehicle mechanics, providing insight into why breakdowns have occurred and what can be done to avoid failures. Questek Telematics has enabled one fleet to significantly curb fuel consumption by presenting a snapshot of each vehicle’s battery voltage to pinpoint any vehicles that need attention – instead of starting every vehicle in the morning and leaving the entire fleet to idle. The system provides information on brake lining status, damaging rapid starts or shutdowns, cost of idling and so on.

Questek Telematics generates concise, easy-to-grasp reports which inform operators of problems and also outline remedial action. Reports may be generated as frequently as operators choose. However, if an alert is triggered – rocketing coolant temperature, for instance – the relevant operator staff will be contacted immediately via SMS.

In the case of an accident, an e-mail to relevant staff will be generated automatically, specifying location, driver and even the intensity of the accident. System data such as speed and rpm can be used in accident reconstruction.

Questek also analyses the data it extracts to identify patterns in fleet and vehicle performance, serving as the basis for predictions.



Questek Telematics Benton Ngwenga and Clinton de Bruin analyse a live dashboard display, mirroring the vehicle’s dashboard

When it comes to vehicle servicing, Questek generates a list of faults from the onboard computer, including the source, severity, duration and nature. These one-page snapshots of vehicle health equip the mechanic with useful information on the vehicle he is servicing. In addition, these are supplemented by reports identifying trends, which serve as the basis for predictions on vehicle performance down the line.

Reports are pitched at relevant staff, with management receiving an overview of fleet performance and trends (such as fuel consumption and safety events), as well as information on fleet utilisation, while operations and technical staff are targeted with information pertinent to their tasks.

Questek Telematics connects directly to a vehicle’s CANbus system for vehicle information to relay to Questek Telematics. In the case of older vehicles, sensors will be connected to provide data. Immediately a unit is fitted, the customer can see all the information on the vehicle.

The system may be purchased outright, with a monthly subscription for reporting and communication costs (communication is via the GSM network), or obtained on a rental basis for a set term. Reports are generated as frequently as customers choose, with monthly or weekly the norm. The system is accessible via the website, or through an app. An advantage of third party installation that De Bruin highlights is that fitment to any vehicle is possible, whereas proprietary systems are restricted to their OEM brands. Operators would also be dealing with a single platform.

While the system is capable of cutting fuel consumption by as much as 10%, De Bruin says it’s essential that there is buy-in from the operator to ensure follow-through with drivers to attain results. “If you have the customer’s buy-in, you’ll have the savings,” he says, adding that it’s not solely about fuel consumption – the maintenance burden will also be eased. ■

Joint committee meeting seeks way forward

THE first meeting combining SABOA's technical and operations committees, hosted in June by Mercedes-Benz South Africa, kicked off with an appeal by SABOA executive manager Eric Cornelius for input on relevant issues for the committees to tackle – with participation from smaller operators also encouraged.

The joint committee meeting was intended to assess whether the format may be a viable solution to revitalise technical committee operations – concern has been expressed about dwindling attendance, the predominance of suppliers rather than operators, and lack of input on technical matters for discussion. Members were encouraged to submit suggestions for technical content they would like addressed during meetings.

Cornelius also outlined the schedule for bus indabas for the remainder of the year, building on the success of last year's events. The bus indabas are aimed at gathering input from members at provincial level, as hosting on a provincial level is likely to make them accessible for more members. The Gauteng event is scheduled for 12 October, followed by the Eastern Cape on 26 October, Western Cape on 16 November and KwaZulu-Natal on 30 November.

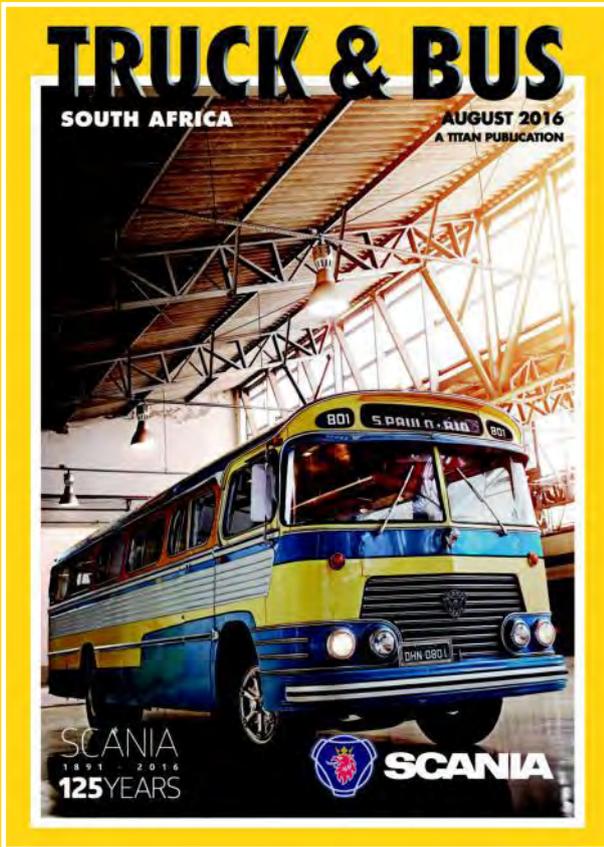
Because of renovation work being done at the CSIR, SABOA has opted to move its annual conference and exhibition to 24 and 25 May next year, during which the Association's AGM will also be held.

The meeting also incorporated an update on technical regulatory matters, presented by Ian Charlton.

Among these were:

- DoT technical requirements. Nothing new had been gazetted. Speed limiters must be fitted on minibuses, midibuses and buses first registered on or after 1 December 2016. There is still no speed limit of 100 km/h for goods vehicles 3 501 kg to 9 000 kg GVM gazetted for comment in April 2014.
- DoT Vehicle Technical Committee (VTC). The industry is excluded, as membership is now limited to officials. It was understood that there have been no VTC meetings as staff energies have been focused on the Tasima/RTMC court cases and investigations.
- NRCS technical requirements. Nothing new had been gazetted. ABS must be fitted on new homologations from 1 January 2016, and on all new imports or vehicles manufactured from 1 January 2017.
- Fuels and emissions. Negotiations were still under way on what grades of clean fuel would be available when, but funding mechanisms for refinery upgrades had not been agreed. There can be no change in emission requirements until clean fuel is freely available.
- SABS position on writing standards for NRCS. SABS had stated that standards intended to be made mandatory must be developed by the NRCS, not SABS. This meant that the overprinting of ECE regulations into SANS standards had been stalled. Negotiations were ongoing.
- SABS position on 'partial' testing. SABS's new policy was to test only a complete standard, refusing to test part of a standard. This affects seat testing, brake testing, lighting, chevrons and number plates. This ruling was being challenged by electrical and chemical sectors and by the number plate association. The greatest effect on automotive could be on the Automotive Laboratory in East London. The auto engineering section at Groenkloof may suffer reduced throughput and closure.
- Drivers' hours. SABS had requested views or support to resuscitate standards for tachographs and tachograph workshops. SABOA's views on tachographs vs OBCs for law enforcement were sought.
- New vehicle requirements for sales into Zimbabwe. The Zimbabwean government had contracted Bureau Veritas (BV) to ensure that imported goods (including vehicle imports) were of acceptable quality and safety.
- New vehicle requirements for sales into Namibia. Short range radio devices and radios must comply with legislation issued by CRAN in Namibia, similar to legislation issued by ICASA in South Africa, but Namibia insisted that all devices were type approved by them, even if already type approved by ICASA. Applications had to be in by 31 July 2016. Buses may be refused entry if not type approved by CRAN.
- Preferential procurement regulations, *Government Gazette*, 14 June 2016 – mainly on BBBEE but also related to bus designation. Comments were due by 15 July 2016.

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