

# FOCUS

## ON TRANSPORT AND LOGISTICS

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### TRUCK TEST 2017 a triumphant success!

Why you need to be  
**OIL SLICK**



**SAFETY  
TRAINING**  
could save lives  
on the road

**TWEETS AND  
TRANSPORT:**  
what can we learn?

**SCANIA**  
proves why Truck Test  
is a team effort



**MICHELIN TAKES CARE  
OF YOUR TYRES WHILE  
YOU TAKE CARE OF YOUR  
BUSINESS**



Michelin Tyre Care is a tool that provides a solution to truck owners and fleet managers with a need for insights and information that will give the best return on investment for their tyres. Fleet managers operate in an increasingly testing environment, with escalating operating costs and a highly competitive landscape. They have a clear expectation which includes safety, efficiency, reliability and cost reduction.

Previously the monitoring of tyres was viewed as a manual process with high-intensity admin, limited frequency of vehicle inspections and reports were not delivered in real time.

Michelin Tyre Care, however, will provide a digital and connected solution for fleet operators.

Michelin works alongside truck owners and fleet managers to analyse their mode of operation, identify their needs and develop innovative services, offering them far more than just tyres, but tyre services.

Michelin Tyre Care has reduced the time it takes to check tyres by threefold; making it possible to consistently check the status of the fleet. As a result, monitoring the pressures, tread depth and general condition of tyres is easier and accurate, enabling optimum coordination of the operations to be carried.

Michelin Tyre Care is all about collecting and recovering all information concerning the tyres on a fleet of vehicles, in a reliable, automatic, simple, rapid and relevant fashion. All this organised intelligence will have an immediate impact on the fleet operators' costs and performance of the tyres.

"Michelin Tyre Care is beneficial to fleet operators, because it reduces breakdown and vehicle immobilization, improves safety of people and goods carried, and control tyre budget," says Yoliswa Nkomo, Operations Marketing Manager – B2B at Michelin.

Michelin is underpinning its role as a business service partner by providing fleet operators with efficient solutions and improve their operational efficiency. Better maintenance, better monitoring, better traceability and better business coordination: with the Michelin Tyre Care digital solutions, detailed truck tyre management will mean getting the best out of tyres.

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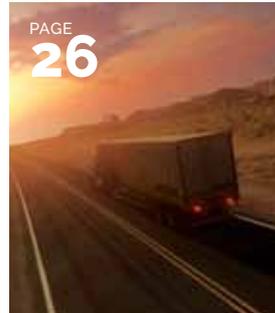
Following a sabbatical in 2016, Truck Test was back with a bang during March 2017.



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## OILS WELL THAT ENDS WELL

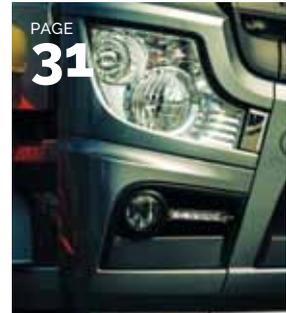
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# JUNK MAIL

So, we are now officially junk – which, quite frankly, has a rather nasty ring to it. I'm mighty peeved about the situation, to put it mildly. I'm annoyed because it could have been avoided – so easily. Alas, that wasn't the case. We will now live with this label for some time, economists warn



CHARLEEN CLARKE

**T**he consequences of our new status are dire – for every single South African. “The impact of junk status cannot be defined by one single event. It does, however, set off a chain reaction ... and the cumulative effect on South Africa is going to be devastating. It will take the country a long time to recover,” warns *South African Market Insights*, a website that provides insights into the South African economy.

was, in fact, a pretty terrific month, with sales rising by a whopping 16.9 percent month-on-month!

Of course then came Zuma's decision to fire Pravin Gordhan and other cabinet ministers who had been so brazen as to stand up to him. We all know how that ended...

Not surprisingly, many captains of industry are concerned. “The next few months will be critical in determining the path we, as a country, will follow. Leadership in all spheres of business, but mostly in government, will be key,” says Gert Swanepoel, managing director of UD Trucks Southern Africa.

Ernie Trautmann, vice president of Hino SA, shares his sentiments. “After all the good news of the first quarter came the political changes, which are a concern for us. If the rand continues its decline (specifically against the yen), we will come under pressure in terms of pricing. If we pass on the pricing, then customers won't buy and so the market will decline. As such, we hope that the rand can stabilise as quickly as possible,” he tells **FOCUS**.

Murray Price, managing director of Eqstra Fleet Management and Logistics, believes that the downgrades are bad news for fleet operators. “Our currency has come under severe pressure. Since the cabinet reshuffle, it has depreciated by 12 percent. This has serious implications on the price of new vehicles, vehicle parts, and, inevitably, on the cost of funding,” he says.

“Not only will the price of new vehicles and parts increase, due to the downgrade and potential devaluation of the rand, the price of insurance will also be impacted by higher vehicle prices. In addition, there is likely to be pressure on local interest rates, which will increase the cost of funding the acquisition of new vehicles,” adds Price.

So, where to now? Well, there's no doubt that we're in for a hard ride. It's difficult for a country to regain an investment grade rating – only six out of 20 countries (that were relegated to junk status over the past 30 years) have achieved this. According to Bloomberg, it took them anything from 13 months to 11 years (seven years is the average). So, we're probably facing seven challenging years.

Thankfully, we are an industry of survivors. Remember 1993? When a mere 7 900 trucks and buses were sold ... in that entire year? It was a horrible time for our industry, but we endured it. We will survive this too ... somehow. **F**



Practically speaking, these “devastating” results could include:

- A weaker exchange rate
- More expensive imports
- A higher cost of borrowing for the government
- Slower economic growth
- Lower standards of living
- Reduced foreign investment in South Africa
- Higher inflation
- Higher interest rates
- Widespread job losses
- An increase in taxation
- Reduced government spending (on things like roads and education)
- A decline in business and consumer confidence

It's a worrying time for every South African – and this, of course, includes people in our industry. Thankfully (let's be grateful for small mercies), the year did start off well. A total of 6 416 new truck sales were recorded in the first quarter of 2017, 3.9 percent up on the same period last year. March



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Fuel accounts for nearly half the Total Cost of Ownership of a truck. Which is why we concentrate on making ours as economical as possible. With Scania, you're paying for incredible reliability and the highest levels of uptime.

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# SCANIA

# An air OF CALM



Truck Test 2017 featured one specific prototype vehicle that had everyone intrigued – the bewinged and bespoilered Aero Truck EPS MAN TGS 26.440. I asked Cameron and William Dudley-Owen of Aero Truck what all the fuss is about



GAVIN MYERS

I experienced something rather remarkable during Truck Test 2017. Pulling up and holding position behind the Aero Truck EPS MAN TGS 26.440, I flicked down the passenger-side window switch of our Mitsubishi Triton support vehicle and stuck my head and camera out the window for a couple of rear-facing tracking shots.

With both vehicles on a flat section of road and the MAN cruising along at (I presume) its 80 km/h maximum speed, experience told me to expect an assault of wind; as the air behind the vehicle would fight its way past me, around and into our vehicle through the open window – leaving me with one, literally, wind-swept hairdo in the process...



Experience, in this case, was incorrect. The air was, in all honesty, as calm as it would've been had the two vehicles been travelling at half the speed. All the while, wind buffeting in our vehicle was, according to the driver, just as calm. Importantly, too, what little hair I've not yet lost was still rooted to my scalp...

How was this so? According to Aero Truck, it's all down to the Aero Tails fitted to the rear of the trailer. Increasing the length of the trailer sides by 750 mm, the Aero Tails are currently being tested with this rig using Abnormal Permits.

"The Aero Tails streamline the flow of the air at the rear of the trailer, which reduces drag and consequently fuel consumption. Tests in America, the United Kingdom and Europe have shown significant improvements in fuel saving with these units fitted," the Dudley-Owens explain.

The tails work in conjunction with other aerodynamic addenda fitted to the rig, such as side "Filla" panels between the trailer units, chassis deflectors and under-chassis wind-deflection skins (which all smooth the airflow around and under the trailer, reducing turbulence), as well as a rear under-bumper deflector on the trailer (which deflects wind up into the vacuum at the rear of the trailer).

"This experimental test rig is on par with current developments worldwide. We have to bear in mind that this is an experimental vehicle, and we are using Truck Test 2017 to showcase the innovations. We hope to show a marginal improvement against vehicles which only have 'off the shelf' aerodynamic kits fitted, when pulling a comparable trailer," say the Dudley-Owens.

They are cautious with their enthusiasm, though.

"The test route is, however, not ideal for demonstrating the improved aerodynamic possibilities of this rig: it is very short and the climb up Van Reenen's Pass will push up average fuel consumption. The aerodynamics will be of no use on this section of the route, since it only becomes truly effective at higher speeds and over longer distances."

That explains the wind-free photoshoot... If nothing else, this unique entry should spark some debate. So how did it perform? Turn to page 14 to find out. **F**

# 682 STRENGTH AT WORK



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**VERSATILE**

**COMFORT &  
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5mm Shell, 6mm ends and 2 x Sets removable 3mm baffles

3" piping; · 1x Manhole 600mm diameter

6mx100mm Heli flex hose with Perrot coupling

1x working platform behind tank

Vertical Spray bar with 3 nozzles

Horizontal Spray bar with 5 nozzles

Painting of interior with two coats of best quality

Epoxy 151 CSF blue tank lining

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# On to a **WINNER**

The team from Scania South Africa loves Truck Test! This was certainly evident in 2017 – where it put in a superb showing and did the brand proud

**W**ith Truck Test making a return to the busiest transport corridor in the country – the N3 between Johannesburg and Durban – the team from Scania had much to celebrate. The N3 is, after all, increasingly becoming a Scania stomping ground as the company's good reputation continues to rise among local operators.

"I like that we went back to one of the most famous and well-known routes in South Africa," says Alexander Taftman, GM product and marketing. "And, if there's one route where we see a lot of R500 customers, it's the N3," he quips.

Of course, this flagship model from Scania SA's long-haul catalogue was an obvious entry, as the vehicle is nicely matched to the route and its hilly terrain.

"The R500 is a high-torque, high-performance vehicle. Its V8 provides a smoother power delivery and the torque curve, which starts from low down, is of benefit to fuel economy. On the other hand, its high power helps with productivity," explains Michael Marosi, pre-sales engineer.

"You can really benefit from this vehicle when you climb to high altitude, especially from sea level. If you put a V8 on the route over an extended period, and calculate the trip time, it will definitely be quicker than a vehicle with different engine characteristics," says Taftman.

Scania's volume seller in the "premium" sector of the market was joined by its volume-selling option in the "fleet" sector: the G460.

"This vehicle is also very relevant to the N3 route," says Andre Vermeulen, pre-sales engineer. "It, too, ran well and made the most of its 460 hp (343 kW)."

However, says Vermeulen, success is not down to the vehicles alone.

"The drivers play a large role, especially in areas like Van Reenen's Pass that require a lot of skill – the vehicle is only as good as the driver."

"William Mabote and Reginald Naidoo, from the Gauteng and KwaZulu-Natal driver-training teams, really did us proud. They are two of our expert driver trainers," adds Jaco Swart, pre-sales engineer, who, along with Marosi, acted as an observer during the test.

For the two men, the chance to enjoy driving in competitor vehicles as observers was not to be missed.

Taftman sums it up: "Truck Test affords such a good opportunity for colleagues from around the industry to get together and share information. Our observers really appreciated being able to change vehicles this year. By doing this, one has an opportunity to socialise more; it's more fun and there's more knowledge to be shared, which everyone is so open to doing because we're in the same industry with the same challenges and opportunities."

While Marosi and Swart took to riding shotgun, the two men comment, almost in chorus, that an

and trailers. Our drivers were able to set their own benchmarks while being guided by our Scania Fleet Management System," says Marosi.

The system is fitted as standard to all Scania vehicles. Another spin-off was the ability to ensure it allowed for the maximum data utilisation for the route.

"As the market is a bit down, it all really comes down to the total operating cost and giving the customer as much benefit as possible with solutions such as the Scania Fleet Management System," adds Swart.



**ABOVE:** (From left) Swart, Marosi, Taftman and Vermeulen before the test.

**BELOW:** The Scania R500 made the most of the early torque and smooth power delivery afforded by its V8.

**RIGHT:** The Scania G460 is one of the brand's best-selling models – and a natural entry into Truck Test 2017.



event such as Truck Test requires a true team effort. "Preparation before the test, and even following up after the test, requires a lot of involvement internally. Thankfully, we've got personnel who are enthusiastic about it and they deserve a heap of thanks," they concur.

"The simplest things that every professional operator will do with his fleet – like ensuring maintenance wouldn't be a problem and ensuring the wheel alignment is 100 percent – make the biggest differences," adds Vermeulen.

"It was also beneficial for each entrant to have the opportunity to run the route beforehand, with the load



For Taftman, the overall goal of Truck Test 2017 was simple: to show that well-maintained vehicles performing at their optimum, with a well-trained driver behind the wheel, can deliver figures achievable by any operator.

"I'm pretty sure that we reached that goal," he smiles. "As this is the only test in the country that's truly objective, it is a benchmark and the results are very valuable to operators and transporters – everyone looks at them."

"I must add that one thing that I loved seeing on the day of the test was that everyone who was there held such a passion for the industry – we really have that in common, which is why we all get along so well at these events.

"I'd like to give a big 'thumbs up' to everyone involved in the whole event. It's a truly important test and it'll be great to see it evolve in years to come, because it's a winner!" Taftman concludes.

We couldn't have said it better ourselves. **F**



## A triumphant **SUCCESS!**

Following a sabbatical in 2016, Truck Test was back with a bang during March 2017. GAVIN MYERS recounts all the action

It was quite possibly one of the most beautiful early morning sunrises I've ever seen ... Wide rays in pink and peach reaching up from the horizon on a backdrop of royal blue sky – it was something spectacular. I called on my best photographic skills to capture it "on film", while we waited for the next truck to depart.

By now it was 06:00 on the button and the trucks had been departing the Engen Blockhouse northbound facility (the start and end point for Truck Test 2017) for 20 minutes already – following a quick briefing by Truck Test coordinator Adrian van Tonder in what had become a very crowded Engen 1-Stop/Wimpy.

More than 50 individuals – including drivers and observers – collected their complimentary coffee and muffin, along with other sponsored goodie packs and Truck Test addenda, before the start.

The send-off went smoothly overall, with the support team from Michelin coming to the aid of participants and double-checking tyre pressures, before following the convoy along the route in its specially prepped support vehicle. The team had already undertaken comprehensive tyre checks the day before when the trucks arrived at the Engen facility to brim their tanks and park off for the night – ensuring all wheels and tyres on the trucks and trailers were in a safe, roadworthy condition.

### THE START

Truck Test 2017 had, in fact, essentially started the week before, when each vehicle rolled up at the Sephaku Cement Delmas facility to collect its payload of palletted cement, generously on loan from Sephaku.

On this day, the skilled Sephaku forklift drivers danced around the trucks (and each other), loading two trailers at a time with ease and precision, before the vehicles were sent across the weighbridge and on their way to secure their cargo.

From there, participants were able to perform some test runs with their vehicles over the ensuing week – Afrit trailers, loads and all – to ensure teams and drivers were confident on the day of the test...

### MOODY BLUES

From the Engen Blockhouse, it was a short 5,5-km drive north on the R59 to the Heidelberg Road off-ramp before heading east for about 21 km through the Midvaal district to the on-ramp to the N3.

Narrow and dense with traffic and pedestrians beginning their Wednesday commute, this section proved an unexpected test for the drivers – something akin to manoeuvring such a rig through town at the beginning or end of its journey.

Then onto the N3 south and the first checkpoint was



the Heidelberg South weighbridge, where each vehicle has to pass through the weigh-in-motion scanners before continuing.

The warm sunny sky we experienced earlier had been blocked out by thick mist by the time the drivers reached the sliver of Mpumalanga province through which the N3 runs. These were not ideal conditions. Drivers needed to be able to read the road and traffic ahead – while maintaining an average speed (it was, at least, indicative of one of the obstacles faced by drivers on this route, mind, and made for a couple of moody on-road photos).

The grey weather would linger as our convoy rolled in, one by one from about 07:00, to the first stop of the day; the Engen Villiers 1-Stop. Here the fuel sponsor had also organised a good old-fashioned Wimpy breakfast – just the thing to warm one up in the moody morning mist.

Not that too many participants stuck [▶](#)





around for a lazy bite, though ... most were back on the road in a blink to ensure they would make good time on the journey.

**THE LIFE OF A TRUCKER**

That's what life on the road is about, though, and one of the reasons why one of the measurable criteria of each vehicle's final result is trip time. Nonetheless, after passing through the De Hoek toll plaza earlier, and now the Wilge toll plaza – with toll fees very kindly sponsored by the N3 Toll Concession (N3TC) – each vehicle would have some more "life on the road" moments to contend with.

Such as roadworks... The N3TC was in full swing with its road maintenance programme ahead of the Easter holidays, which saw various sections of the national route reduced to one lane in each direction. As with each of the previous Truck Tests, the rules state that, in such a



**ABOVE:** From an early morning start to an overall easy run, Truck Test 2017 was highly praised.

**RIGHT:** Refueling at Engen Blockhouse was easy and efficient.



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circumstance, drivers are to obey all rules of the road and adhere to the temporary speed limits.

In doing so, each vehicle was affected as fairly as possible by these unavoidable obstacles en route. In all fairness, though, it's regular maintenance, such as that experienced on the day, that results in the N3 being one of the best national roads in South Africa.

Before long, the route schedule called for a comfort stop at possibly one of the most well-known truck stops on this route: Highway Junction in Harrismith.

**THE TURNAROUND POINT**

The infamous Van Reenen's Pass was the next obstacle, which was tackled with aplomb by most of the participants (there were some who came up against another obstacle that trolls this section of the route – other distressingly slow vehicles that barely have the power to comfortably and safely undertake the ascent).

Before the return ascent, though, participants were required to pull into the barren parking lot of the otherwise somewhat-quaint Tugela Truck Inn. By now the time was rapidly approaching midday, and lunch was on everyone's mind.

Kicking up a trail of heavy grey dust as it departed from Tugela Truck Inn, the final vehicle in the convoy hit the N3 north. Yet another stop at Highway Junction Harrismith was mandated – this time for some well-deserved and, frankly, utterly delicious, boerie rolls and chicken sosaties. Under the watchful eye of a giant inflatable Bibendum (that's the Michelin Man, if you didn't know), drivers and passengers tucked in to their lunch, sponsored by Engen and happily supplied by Ben Deysel and his team at Highway Junction.

**PUSHING TIN**

Re-energised and with drivers setting course for home, a quick stop at the Heidelberg North weighbridge was mandated. Here, Van Tonder, with the help of some of the friendliest traffic officials in the business, validated each vehicle's payload. The final push back to Engen Blockhouse had begun.

Back at the same pumps of the northbound facility, Martin Dammann, his team from TruckScience and Vic Oliver set about refuelling and recording the raw data at the pumps.

The **FOCUS** team, meanwhile, completed its final set of interviews and photos under the fiery orange of the setting sun. Truck Test 2017 had come to an end, but it would be one to remember.

**FOCUS** and the organisers of Truck Test 2017, TruckScience, Engen and Ctrack, would like to express their sincere thanks to all participants and the outstanding sponsors and support teams: Aero Truck, Afrit, BPW Axles, Cargo Carriers, DAF, Dromex, Elfrans, ESP Courier Services, Hyundai, Iveco, Knorr-Bremse, Loadtech, MAN, Mercedes-Benz, Michelin, N3TC, One Sure, Quantum Concept, Scania, Sephaku Cement Dangote, Sinotruk, Sub-Saharan Tyre Services, Van Wettens, Voith, Wabco, Wieloc, and ZF. **F**



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**KNORR-BREMSE**

VEHICLE		CURRENT VEHICLES				
Make		Mercedes-Benz	Scania	Iveco	MAN	
Range		Actros	G Series	Stralis	TGS	
Model		2646LS-33 DD	G460 CA6x4 MSZ	AS750S48TZP Hi-Way	26.480 6x4 BLS EL DD	
<b>DIMENSIONS</b>						
FW offset (standard / tested)	mm	620 / 420	375 / 475	450 / 450	450 / 450	
Overall combination length	mm					
<b>FUEL</b>						
Fuel tank 1 capacity	ℓ	650	470	600	580	
Fuel tank 2 capacity	ℓ	280	470	230	460	
Fuel in tank at weighbridge	ℓ	234	77	226	260	
<b>MASS, CAB &amp; EXTRAS</b>						
Permissible front axle mass	kg	7 500	7 700	7 700	7 700	
Rims (standard / tested)		Aluminium / Aluminium	Steel / Steel	Aluminium / Aluminium	Aluminium / Aluminium	
Rear suspension		Air	Parabolic leaf springs	Air	Air	
Cab roof / No. of bunks		High / 2	Medium / 2	High / 2	High / 2	
Aerokit (standard / tested)		Mercedes-Benz / Mercedes-Benz	Scania / Scania	None / Aero Truck	MAN / MAN	
Tare (spec sheet) *	kg	8 393	8 640	8 540	8 867	
			8 713 	8 986 	8 900 	8 631 
Tare (tested) *	kg					
Vehicle unladen **	kg	9 070	9 210	9 250	9 010	
Straps and corner plates	kg	50	50	50	50	
Additional aerodynamics	kg	0	0	0	0	
Trailer unladen	kg	10 000	10 000	10 000	10 000	
Combination unladen **	kg	19 120	19 260	19 300	19 060	
Payload	kg	34 520	34 520	34 520	34 520	
Cross combination mass **	kg	53 640	53 780	53 820	53 580	
* Includes fifth wheel but excludes driver, fuel and spare wheel						
** Includes fifth wheel, a small quantity of fuel, driver and observer						
<b>ENGINE</b>						
Make		Mercedes-Benz	Scania	Iveco	MAN	
Model		OM 501 LA	DC13 106	Cursor 13 (VGT)	D2676 LFO3	
Capacity	cm <sup>3</sup>	11 946	12 700	12 880	12 419	
Layout		V6	Inline 6	Inline 6	Inline 6	
Fuel injection system		Electronic pump-line-nozzle	Unit injector PDE	6 unit injectors	Common rail	
Power @ r/min	kW	335 @ 1 800	338 @ 1 900	354 @ 1 540 - 1 900	353 @ 1 700 - 1 900	
Torque @ r/min	Nm	2 200 @ 1 080	2 250 @ 1 000 - 1 350	2 200 @ 1 000 - 1 540	2 300 @ 1 000 - 1 400	
r/min @ 80 km/h in top gear	r/min	1 247	1 244	1 252	1 248	
Emissions standard		Euro 3	Euro 3	Euro 3	Euro 2	
<b>TRANSMISSION</b>						
Make		Mercedes-Benz	Scania	ZF	ZF	
Model		G281-12	GRS905R	12 AS 2330 TD	12 AS 2331 DD TipMatic	
Type		Constantmesh	Synchromesh	Synchromesh	Constantmesh	
Shift		Automated Manual	Manual and Automated	Automated Mechanical	Manual and Automated	
No. of forward gears		12	12	12	12	
First / top gear ratio	:1	14,91 / 1	11,32 / 1	15,86 / 1	15,85 / 1	
<b>DRIVE AXLE</b>						
Make		Mercedes-Benz	Scania	Meritor	MAN	
Reduction type		Single	Single	Single	Single	
Final ratio (standard / tested)	:1	3,077 / 3,077	3,07 / 3,07	3,4 or 3,09 / 3,09	3,08 / 3,08	
<b>BRAKES &amp; TYRES</b>						
Exhaust brake		Standard	Standard	No	Standard	
Engine brake		Standard	No	Standard 306 kW	Standard 270 kW	
Retarder / Intarder		Voith 3 500 Nm	Retarder 500 kW	Intarder 500 kW	Intarder 500 kW	
Tyre make		Michelin	Goodyear	Michelin	Michelin	
Size and ply rating - front		315/80 R22.5	385/65 R22.5	315/80 R22.5	385/65 R22.5	
Size and ply rating - rear		315/80 R22.5	315/80 R22.5	315/80 R22.5	315/80 R22.5	
<b>LIST PRICE</b>						
List price (excl. VAT)		R1 753 000	R1 792 869	R1 742 950	R1 850 000	

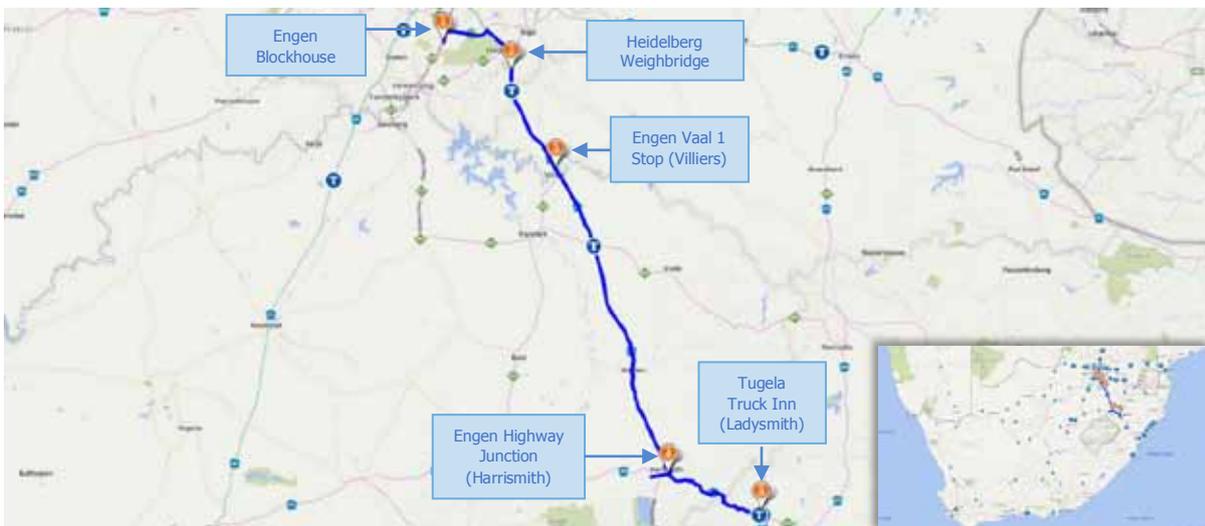
		TRIDEM FLATDECKS			TAUTLINER INTERLINK
		CURRENT VEHICLES		COMING SOON	PROTOTYPE (AERO)
Scania	MAN	Iveco	DAF	SINOTRUK	MAN
R Series	TGX	Trakker	XF	HOWO V7G	TGS
R500 LA6x4 MSZ	26.540 6x4 BLS	AT440T44TH SR	105.460 SR 1360	64430/4	26.440 6x4 BLS (LX)
375 / 475	450 / 550	450 / 530	300 / 500	325 / 325	450 / 450
470	550 (plus 75 l AdBlue)	600	445	600	580
470	350	-	445	-	450
99	183	193	169	292	194
7 700	7 700	7 700	7 700	7 000	7 700
Aluminium / Aluminium	Aluminium / Aluminium	Aluminium / Aluminium	Steel / Aluminium	Steel / Steel	Steel / Aluminium
Parabolic springs	Air	Parabolic leaf springs	Air	Semi-elliptic leaf springs	Air
High / 2	High / 2	Low / 1	High / 2	High / 2	High / 2
Scania / Scania	MAN / MAN	None / None	None / Aero Truck	None / None	Aero Truck (Truck Tractor and Trailer)
8 827 9 267	8 915	8 970	8 475	8 260	8 375
	 8 756	 8 818	 8 858	 8 895	 8 917
9 510	9 070	9 140	9 160	9 300	9 240
50	50	40	40	40	50
0	0	0	0	0	450
10 000	10 000	6 640	6 640	6 640	10 000
19 560	19 120	15 820	15 840	15 980	19 740
34 520	34 520	30 620	30 620	30 620	34 520
54 080	53 640	46 440	46 460	46 600	54 260
Scania	MAN	Iveco	Paccar	Sinotruk	MAN
DC16 04 500	D2676 LF08	Cursor 13 (VGT)	MX340 (ECE R24-03)	MC11.43-30	D2676 LF04
15 607	12 419	12 880	12 900	11 518	12 419
V8	Inline 6	Inline 6	Inline 6	Inline 6	Inline 6
Unit injector PDE	Common rail	6 unit injectors	6 electronic unit pumps	6 electronic unit pumps	Common rail
368 @ 1 900	397 @ 1 900	324 @ 1 450 - 1 900	340 @ 1 500 - 1 900	316 @ 1 900	324 @ 1 700 - 1 900
2 400 @ 1 100 - 1 300	2 500 @ 1 050	2 100 @ 900 - 1 470	2 300 @ 1 000 - 1 410	2 100 @ 1 000 - 1 410	2 100 @ 1 000 - 1 400
1 244	1 299	1 304	1 252	1 399	1 299
Euro 3	Euro 5 (AdBlue)	Euro 3	Euro 3	Euro 3	Euro 2
Scania	ZF	ZF	ZF	ZF	ZF
GRS905R	12 AS 2530 OD TipMatic	12 AS 2330 OD	12 AS 2540 TD	16 S 2230 TD	12 AS 2331 OD TipMatic
Synchromesh	Constantmesh	Synchromesh	Synchromesh	Synchromesh	Constantmesh
Manual and Automated	Manual and Automated	Automated Mechanical	Automated Mechanical	Manual	Manual and Automated
12	12	12	12	16	12
11,32 / 1	12,33 / 0,78	12,33 / 0,78	15,86 / 1	13,8 / 0,84	12,33 / 0,78
Scania	MAN	Meritor	DAF	Sinotruk	MAN
Single	Single	Single	Single	Single	Single
3,07 / 3,07	4,11 / 4,11	4,125 / 4,125	3,09 / 3,09	4,11 / 4,11	4,11 / 4,11
Standard	Standard	No	Standard	Standard	Standard
No	Standard 270 kW	Standard 306 kW	Standard	Standard	Standard 270 kW
Retarder 500 kW	Intarder 500 kW	Intarder 500 kW	Intarder 500 kW	None	Intarder 500 kW
Michelin	Michelin	Goodyear	Goodyear	Chengshan	Michelin
385/65 R22.5	385/65 R22.5	315/80 R22.5	315/80 R22.5	315/80 R22.5	385/65 R22.5
315/80 R22.5	315/80 R22.5	315/80 R22.5	315/80 R22.5	315/80 R22.5	315/80 R22.5
R1 979 298	R2 105 000	R1 522 950	R1 695 000	-	-

TAUTLINER INTERLINKS

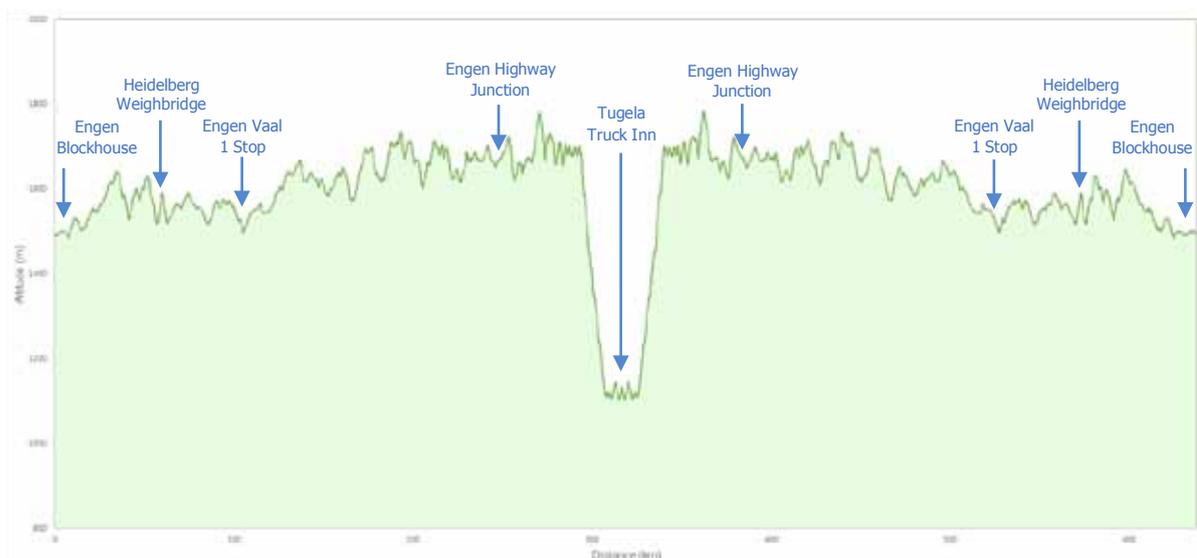
VEHICLE		CURRENT VEHICLES				
Make		Mercedes-Benz	Scania	Iveco	MAN	
Range		Actros	G Series	Stralis	TGS	
Model		2646LS-33 DD	G460 CA6x4 MSZ	AS750S48TZP Hi-Way	26.480 6x4 BLS EL DD	
Odometer at start	km	3 058	31 505	97 091	97 497	
Simulated top speed	km/h	80	80	80	80	
<b>Ø SPEED FOR INDIVIDUAL LEGS</b>						
Meyerton to Villiers:	Simulated km/h	66,7	66,7	66,7	66,7	
	Actual km/h	69,2	69,1	65,2	64,6	
Villiers to Harrismith:	Simulated km/h	69,2	69,7	69,7	70,3	
	Actual km/h	69,9	72,8	65,7	69,1	
Harrismith to Tugela:	Simulated km/h	54,8	56,9	54,4	55,6	
	Actual km/h	56,7	58,2	56,5	59,4	
Tugela to Harrismith:	Simulated km/h	46,6	48,1	48,2	48,7	
	Actual km/h	48,7	52,6	46,8	47,4	
Harrismith to Villiers:	Simulated km/h	67,3	67,7	67,6	68,0	
	Actual km/h	69,6	69,3	65,3	65,9	
Villiers to Meyerton:	Simulated km/h	65,6	65,6	65,6	65,6	
	Actual km/h	64,8	64,7	62,5	62,6	
<b>OVERALL RESULTS (638,1 km)</b>						
Simulated payload	kg	34 850	34 850	34 850	34 850	
		34 520	34 520	34 520	34 520	
<b>Actual payload</b>	kg					
Simulated total time	hh:mm	10:04	9:58	10:00	9:55	
Actual total time	hh:mm	9:48	9:37	10:18	10:06	
Simulated Ø speed	km/h	63,3	64,0	63,8	64,3	
		65,1	66,3	61,9	63,1	
<b>Actual Ø speed</b>	km/h					
Simulated Ø fuel consumption	ℓ/100 km	54,15	54,14	54,86	53,60	
	km/ℓ	1,85	1,85	1,82	1,87	
Simulated Ø AdBlue consumption	ℓ/100 km	-	-	-	-	
		53,56	50,04	46,97	46,34	
<b>Actual Ø fuel consumption</b>	ℓ/100 km					
	km/ℓ	1,87	2,00	2,13	2,16	
<b>Actual Ø AdBlue consumption</b>	ℓ/100 km	-	-	-	-	
Simulated payload productivity *		40,7	41,2	40,5	41,8	
		41,9	45,7	45,5	47,0	
<b>Actual payload productivity *</b>						

\* Payload Productivity Factor = Payload (tonnes) x Ø speed (km/h) / (Ø fuel consumption (ℓ/100 km) + Ø AdBlue consumption (ℓ/100 km))

ROUTE AND ALTITUDE PROFILE: ENGEN MEYERTON TO TUGELA TRUCK INN ROUND TRIP (638,1 km)



		TRIDEM FLATDECKS			TAUTLINER INTERLINK
		CURRENT VEHICLES		COMING SOON	PROTOTYPE (AERO)
Scania	MAN	Iveco	DAF	SINOTRUK	MAN
R Series	TGX	Trakker	XF	HOWO V7G	TGS
R500 LA6x4	26.540 6x4 BLS	AT440T44TH SR	105.460 SR 1360	64430/4	26.440 6x4 BLS (LX)
MSZ					
60 769	9 518	6 599	47 417	6 599	133 226
80	80	80	80	80	80
67.4	68.2	68.2	68.2	67.4	66.0
69.3	64.4	64.4	64.8	64.1	69.6
70.7	71.2	70.5	71.4	69.6	68.8
73.4	68.7	69.4	71.3	66.6	72.3
57.9	57.3	59.7	60.7	51.7	56.2
61.1	58.7	62.7	59.8	47.9	60.0
49.8	50.7	50.4	52.9	48.3	46.3
49.1	51.2	52.5	52.5	48.4	49.5
68.8	69.0	69.0	69.9	68.8	66.8
70.3	68.5	69.9	70.5	66.3	70.8
66.2	66.9	66.9	66.9	65.6	64.9
65.4	65.0	65.6	66.8	63.4	66.8
34 850	34 850	30 750	30 750	30 750	34 850
34 520	34 520	30 620	30 620	30 620	34 520
9:49	9:45	9:44	9:35	10:00	10:06
9:34	9:53	9:43	9:39	10:22	9:33
65.0	65.4	65.5	66.5	63.8	63.1
66.6	64.5	65.6	66.1	61.5	66.7
54.29	54.50	45.65	45.34	47.21	53.20
1.84	1.83	2.19	2.21	2.12	1.88
-	1.67	-	-	-	-
51.29	50.54	46.84	44.29	51.71 No sight glass was fitted.	52.04
1.95	1.98	2.14	2.26	1.93	1.92
-	3.06	-	-	-	-
41.7	41.8	44.1	45.1	41.6	41.3
44.8	41.5	42.9	45.7	36.4 No sight glass was fitted.	44.3





## NOTES AND ADJUSTMENTS TO THE RESULTS:

### ALL VEHICLES:

- Speed violations of 86 km/h or more were taken from the Ctrack data at 30 seconds per violation.
- Speed violations at roadworks were taken from the observer notes, at a slightly reduced weighting of two transgressions being equal to one speed violation of 30 seconds.
- To eliminate the time to find suitable parking at the various stops, the travel times were measured from departure to arrival time, using the Ctrack Replay feature.
- The clock was stopped when the engine was shut down, and for any unnecessary delays at the weighbridges and stop and go on the R550.
- No major delays were recorded at the tolls, therefore no corrections have been made here.

### MERCEDES-BENZ ACTROS 2646LS-33 DD:

- A simulated time and fuel deduction of six minutes and 0,5 litres, respectively, was applied for missing the turn-off at Engen Highway Junction.
- Two speed violations were recorded, resulting in an overall one-minute time penalty.

### SCANIA G SERIES G460 CA6x4 MSZ:

- The fuel tank was overfilled by 27 mm at the end of the test, due to the slow release of air from the sight glass. A further 20 litres was then added to determine the fuel per millimetre, which was calculated at 0,833 litres per millimetre, and therefore  $27 \times 0,833 = 22,5$  litres was deducted from the fuel fill-up.
- Ten speed violations were recorded, resulting in an overall five-minute time penalty.

### IVECO STRALIS AS750S48TZR HI-WAY:

- A simulated fuel deduction of 0,2 litres was applied for the loop inside the Heidelberg Northbound weighbridge. The time was not recorded.
- No speed violations were recorded.

### MAN TGS 26.480 6x4 BLS EL DD:

- One speed violation was recorded, resulting in an overall 30-second time penalty.

### SCANIA R SERIES R500 LA6x4 MSZ:

- Ten speed violations were recorded, resulting in an overall five-minute time penalty.

### MAN TGX 26.540 6x4 BLS:

- Sixteen speed violations were recorded, resulting in an overall eight-minute time penalty.

### IVECO TRAKKER AT440T44TH SR:

- Four minutes were deducted for stopping to secure the load on the first leg of the day.
- Overtaking violation on Van Reenen's Pass; no penalty applied.
- Six speed violations were recorded, resulting in an overall three-minute time penalty.

### DAF XF 105.460 SR 1360:

- Overtaking violation on Van Reenen's Pass; no penalty applied.
- No speed violations were recorded.

### MAN TGS 26.440 6x4 BLS (LX) (AERO):

- A simulated time and fuel addition, of 1,5 minutes and 0,7 litres, respectively, was applied for missing the stop at Blockhouse Southbound on the return leg.
- No speed violations were recorded.

### SINOTRUK HOWO V7G 64430/4:

- Twelve speed violations were recorded, resulting in an overall six-minute time penalty.
- No sight glass was fitted as per the rules. The fuel consumption and productivity may not, therefore, be 100-percent accurate. This is also noted in the results.

# Predictive cruise control ROCKS!



The results of every Truck Test are eagerly awaited, debated and sometimes criticised. MARTIN DAMMANN, director of TruckScience, explains this year's results and provides some behind-the-scenes commentary

**T**ruck Test 2017 set out to level the playing field by testing truck tractors with identical trailers and loads. However, the test showed, yet again, that the performance of a vehicle is not limited to its metal and plastic components, but is heavily influenced by a number of factors, including the preparation of the vehicle, knowledge of the route and – of course – the driver.

## PRODUCTIVITY

TruckScience analyses average speed and fuel consumption to calculate payload productivity for each rig. There was a surprising 13 percent variance in overall productivity of the tautliner interlink combinations tested. Results simulated by TruckScience in advance of the test had predicted a variance of only three percent.

Actual results and feedback from drivers and product managers suggest that the three most influential factors on productivity were the technical specifications of the vehicle, the mileage on the vehicle, and the driver's technique for managing the momentum of the rig.

## TECHNICAL SPECIFICATIONS

The technical specifications of the vehicles accounted for a productivity difference of about three percent (or 1.5 l/100 km), with advantages gained by selecting a Euro-2 over a Euro-3 engine, a transmission with a direct-drive top gear, and an engine output of roughly 480 hp (358 kW) or 2 300 Nm.

## MILEAGE

A further three percent was gained by entering a vehicle with at least 50 000 km on the clock; the engine having been properly run in, thus having to overcome less internal friction.

## MOMENTUM MANAGEMENT

The biggest difference of all came from the momentum management applied by some of the drivers. Referred to as "predictive cruise control" in the global trucking industry, this is where the

topography of the route is used to optimise the vehicle's momentum.

The trick is to minimise gear changes when climbing, and to delay the point at which the engine brake or retarder is applied on the downhill sections. This technique resulted in a substantial fuel saving of about 4 l/100 km (or eight percent), and a compromise of about 3 km/h (or four percent) in average speed, with the net effect being an advantage of four percent in overall productivity.

## STRONG ARGUMENT FOR PREDICTIVE CRUISE CONTROL

The undulating nature of the topography, especially the section from Johannesburg to the top of Van Reenen's Pass, provided a perfect opportunity to put the concept of predictive cruise control to the test. It takes a dedicated and patient driver to manually apply this technique, but it certainly makes a strong argument for bringing this technology to South Africa.

## EURO 5

With only one Euro-5 vehicle, it is not possible to draw any conclusions about this technology. Although the vehicle achieved a reasonably good fuel consumption, the AdBlue consumption of 3 l/100 km, at a cost of R15 per litre, somewhat negated this benefit, resulting in a net loss of about three percent in productivity. Perhaps in future the productivity formula should be tweaked to take into account the environmental benefits of this technology.

## AERODYNAMICS

The prototype rig – fitted with advanced aerodynamics – achieved a reasonably good productivity factor. However, since there was hardly any wind to speak of on the day, it is difficult to quantify the full potential in fuel saving.

With improved aerodynamics receiving a huge amount of attention and investment in advanced economies, it is encouraging to see designs for local vehicle configurations being developed and tested. **F**

# A good showing **BY MAN**



Witnessing a beautiful, early sunrise was a symbol of things to come at Truck Test 2017 for MAN Truck & Bus South Africa. The whole experience – from sunrise to the especially sunny results of its TGS 26.480 EfficientLine – was one to remember



One highlight that stands out was experiencing the early sunrise shortly after the start from the comfort of our vehicles. Compared to driving a car, you can really savour such a moment over a cup of coffee at a slower speed and elevated position," explains Dean Temlett, head of business solutions and training at MAN Truck & Bus SA.

For the MAN team, the whole event was memorable; especially the "butterflies" that come with trying to navigate the infamous Van Reenen's Pass with a laden vehicle safely.

"It's also something special to witness and experience the effectiveness of MAN's auxiliary braking systems, which can safely maintain those descent speeds without the need for the foundation brakes," Temlett adds, referring specifically to the MAN Pritarder fitted to the TGS 26.540 6x4 BLS XLX Euro 5 and the intarder fitted to the TGS 26.480 6x4 BLS LX EfficientLine.

"The MAN Pritarder has received particularly good feedback from drivers, who can exploit its auxiliary

braking power independently of the vehicle speed. The additional torque and power of this model is also reported by drivers to assist them in maintaining more momentum for longer periods on hills with fewer gear changes. This improves trip turnaround times and fuel consumption on topographically challenging routes," he explains.

MAN's primary entrant for Truck Test 2017, the TGS 26.480 6x4 BLS LX EfficientLine, was always expected to "come out tops on fuel consumption".

"We are absolutely delighted with the performance of this model – with a fuel consumption of 46,3 l/100 km it really did show our prowess on the day. It also exceeded the theoretical simulated result for the unit by 14 percent!" says Dave van Graan, head of special sales projects, with delight.

"Both of the MAN vehicles produced good results, and the 480 proved to be the optimal transport solution on the day. Both units can be selected as the right truck for the job when hauling close to 55-t gross combination mass on an undulating route... It is particularly pleasing to see such great results, despite numerous challenges such as roadworks,





**TOP:** Dean Temlett and his observer, Johan Meyer from Iveco, enjoying their time on the road.

**ABOVE:** Gert Vorster (left) with Dean Temlett and the two MAN vehicles they piloted, the TGX 26.540 and TGS 26.480.

slow-moving traffic, inspections by traffic officials and other unplanned interruptions en route," Temlett adds.

During Truck Test 2017 this was certainly the case. "We knew the TGX would have a faster turnaround

time and average speed, while sacrificing some fuel efficiency." However, a quick look at the results table on page 14 confirms that the TGX performed admirably.

"The TGX may not have been the best performer in this specific test, however it will certainly come into its own on a different long-haul route with potentially tougher overall topographies that demand faster turnaround times and average speeds, as well as during stricter trip-utilisation applications," Van Graan notes.

The men both praise the route as a "challenging, yet meaningful test for both man and machine".

"The N3 is notorious the world over. Not only does one experience vastly differing topography, you have significantly differing altitudes. These factors combine with naturally occurring influencers on vehicle performance, such as ambient temperatures and wind," Temlett says.

Van Graan adds that the MAN team is pleased that the organisers of Truck Test 2017 did everything in their power to rule out as many variables as possible on the day.

"In our opinion, Truck Test 2017 was one of the most well-organised, well-run, well-audited and transparent tests to date. The format was normalised in such a way that the two main variables influencing the results were the vehicle and driver," he explains.

"Our performance in the test demonstrates the ideal marriage of man and machine when combining our vehicles with the MAN ProfiDrive professional driver training, which optimises the overall performance of our trucks," Temlett elaborates.

"Truck Test is an opportunity to verify our theoretical simulation calculations and then demonstrate practically how our products stack up in real-world operation. We are happy to confirm that the MAN vehicles can produce in practice what they do in simulated desktop exercises.

"The added bonus is to see how similar vehicles from our competition stack up to our own. We are delighted that the specification enhancements made to the TGS 26.480 6x4 BLS EfficientLine will enable our customers to buy confidently and realise the operational results that this vehicle brings," says Van Graan.

Regardless of the results, for team MAN, Truck Test 2017 was a resounding success.

"We function in a small, yet vitally important industry with great people who work tirelessly to enhance the experience that our customers have with us as suppliers, and who also try very hard to improve the overall quality of our industry through collective engagement of cross-functional experts.

"We are proud to be part of it all!" Van Graan concludes. **F**

# Quiet **CONFIDENCE**

Following its stellar performance in Truck Test 2015, DAF was back in 2017 with all the enthusiasm that comes with the anticipation of a repeat performance



**D**AF is a brand currently on the up – its presence in the market and reputation among operators is increasing thanks to great aftersales support, provided by Babcock, and the performance of its trucks on the road. The brand's entry – and performance – with the XF 105.460 in Truck Test 2015 helped a lot, too.

"In 2015, DAF outperformed other brands in the interlink category, proving to the industry that DAF trucks offer superior performance and improve operator profitability. We were delighted to be able to demonstrate the performance capability of DAF's trucks at Truck Test 2015," recounts Wilna Steyn, group chief finance officer – Africa, Babcock.

When Truck Test 2017 rolled around, the DAF team was excited to once again show what its vehicles have to offer – but this time the aim was slightly different.

"Our aim was to show that DAF has the right solution for any long-haul operation in the South African market. Having already proved the truck's outstanding performance in the interlink category during Truck Test 2015, we took the decision to test its performance in the triaxle category this year," Steyn explains.

Garry Webber, GM technical services, Babcock, agrees: "The vehicle is no different to the one we entered in 2015, so, to give the industry an idea of its overall performance, we decided to show the triaxle market what the vehicle could do within that application."



"This places us in a good position to show, over two tests, that DAF offers its customers a vehicle that returns top-class performance," Steyn reiterates.

For the DAF team, the format that Truck Test follows holds great value.

"It's difficult to determine a vehicle's ultimate performance in a fleet – there are too many variables; they don't pull the same weight or drive the same routes, and drivers might be unfamiliar with the trucks. There are many factors that impact the fuel consumption and overall productivity of a truck.

"Truck Test is the only event in the country to put competing truck brands through their paces on an equal footing. It's a unique, exciting event that returns facts pertaining to the performance of each truck with no variables," Steyn explains.

"This makes it a must-attend event for DAF. We love the opportunity to prove the performance of our trucks in raw numbers – and not just in words," she adds.

DAF's driver on the day was driver trainer Denford Mamvura, while Webber acted as an observer in a competitor vehicle.

"We loved the excitement and atmosphere on the day – with all the sponsors and original equipment manufacturers gathered at the start to see the trucks off. The route offered a good test of ability and was truly representative of what the majority of trucks experience daily. It was well organised," Webber says. "We were pleased with our time and fuel consumption and had no issues with the vehicle. We were happy with our performance on the day."

While Steyn and Webber are hoping for good results from the test, the day-to-day performance of the brand's vehicles in an operating environment is



one of the main factors contributing to its upward trajectory.

"We've gained momentum with our trucks achieving great acceptance in the market. We're seeing an increase in enquiry listings and we've actually underestimated the advance in customer acceptance," says Steyn, adding that customers are overcoming hesitance towards DAF thanks to Babcock's seven-year run as distributor and the aftersales support services it has introduced.

"The industry is starting to see that DAF is here to stay and has the service and support to back up the good performance, productivity and fuel consumption of the vehicles. These include tailor-made after-sales services such as finance, repair and maintenance contracts and Executrax on-board telematics.

"It also extends to our network infrastructure that adapts to meet customers' requirements as their needs change – ensuring they are catered for wherever they need a service point. Drivers also enjoy driving the vehicles – word is starting to spread that DAF trucks do perform," Steyn says with a smile.

Up next for the brand are more models and increased capability of the XF and CF to cater for a wider range of vehicle applications and industry sectors.

Unfortunately, you'll have to wait a few months before these announcements are made, but, for now, if you're interested in the long haul, DAF has an increasingly popular vehicle for you... **F**



# LOADTECH'S

## fancy gadgets

Loadtech, a leading South African manufacturer of quality load cells and weighing technology, partnered with Truck Test for the second time and, once again, its gadgets didn't disappoint. Loadtech showed off its new wireless technology used in its OnBoard weighing systems

**J**ohn Harrison, Loadtech MD, says the difference between the OnBoard wireless weighing system and previous systems is the use of wireless signals between sensors, instead of cables.

"This new technology works by mounting wireless, remote weight sensors on each axle group to measure the loaded weight. The weights are sent to a hand-held display, which assists the driver to load correctly," explains Harrison.

Loadtech's load cell range extends from 300 g to 500 t with accuracies from 0.2 to 0.03 percent, most of which are available from stock.

The benefits of this wireless technology include a reduction in cost and long-term maintenance downtime of the system. It is also easy to install.

Loadtech has been working to resolve overloading in the trucking industry since 2000, but began manufacturing weighing sensors for the industrial weighing market in 1987. "Over the years, Loadtech has continually developed new and better products to meet the requirements of the trucking industry," says Harrison.

Loadtech also markets the nifty Vigia tyre-pressure system. "This system has been available for the past

few years and has proved that it is able to withstand the rough conditions found in the African market," says Harrison.

The system jumps into action in the event of a loss of tyre pressure. Harrison explains: "The Vigia system will pump the tyre while the truck is moving so that it can reach its destination on time. The tyre can then be repaired at the depot instead of en route."

When an incident occurs and the system takes effect, the driver is alerted in real time to the state of the tyre pressure as it gets inflated by the system.

"Stoppages en route as a result of tyre failures can reduce the effectiveness and profitability of a company," Harrison says.

"The Vigia system therefore assists in terms of on-time delivery, which in turn increases a company's efficiency and profit margins."

The OnBoard wireless weighing system and the Vigia tyre-pressure system are examples of only some of the gadgets Loadtech has to offer. The company has an extensive range of products from Vishay Transducers, Datum and Nobel and uses its more than 30 years of experience to produce specialised and custom-made weighing solutions. **F**

**ENGEN**  
**DYNAMIC**  
Diesel



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Engen Dynamic Diesel is a fuel so advanced that it not only protects new engines, but also cleans the fuel systems of older engines to help restore lost power. Its trademarked detergent additive counteracts injector fouling – increasing fuel economy and enhancing engine performance.

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**ENGEN**

# OILS WELL

that ends well

GAVIN MYERS and Mitch Launspach – inland sales manager: commercial, at Fuchs Lubricants South Africa – drop down to molecular level to find out how oils protect a vehicle's vital mechanical components

**M**odern truck engines operate at high temperatures, generally for long periods and under heavy loads. Stress on mechanical components can be extreme and, as such, require the highest quality lubricants (as specified by the manufacturers of these components) to ensure reliability and longevity.

A modern lubricant therefore needs to perform a multitude of jobs to keep things running smoothly. The lubricants you use in your major driveline components (engine, gearbox and differentials) need to be of high quality. But what does that mean?

## THE IMPORTANCE OF QUALITY

Most locally manufactured lubricants will carry a European Automotive Manufacturers Association (ACEA) specification and an American Petroleum Institute (API) specification.

"The best lubricant recommendations are those of the manufacturers themselves. Engineers spend years designing and developing each specific piece of equipment. They know the exact lubrication and additive mix requirements and the quantity of additive pack to be used (treat rate) for the equipment to operate at peak levels under the most extreme conditions," says Launspach.

All this leads us to two important questions. What are the main functions of oil? Which one is best to use?

## FORM...

Oils are available in mineral, semi-synthetic or fully synthetic forms, each with different properties brought about by the number of different refining processes.

"Each additional process creates a more stable, homogeneous and higher-quality base oil. After the

initial refining process (which is purely a distillation process) the resulting base oil is called a Group I mineral oil, and is suitable for the manufacture of a wide range of automotive and industrial lubricants.

"A second process will produce a base oil of a slightly higher quality, which is now a Group II mineral base oil.

"Following a third refining process, the oil would be classed as a Group III base oil and is now also classed as a semi-synthetic base oil.

"Further refining creates Group IV poly-alphaolefin base oils, and Group V Poly Alkaline Glycol and Ester base oils," Launspach explains.

Both Group IV and Group V are considered full-synthetic base oils, and are used in the manufacture of the highest-quality lubricants.

"The various categories are directly related to quality, but are in no way related to the viscosity (thickness) of the oil. In all critical performance parameters, synthetic lubricants provide significant advantages over – and easily outperform – mineral oils," he adds.

## ...AND FUNCTION

Oils have five main areas of function that ensure the smooth and healthy running of a vehicle.

### 1. Heat

Most high-spec engine oils are now manufactured with synthetic or semi-synthetic base oils as these are more stable under high-temperature and high-stress operations.

"It is important that the lubricant maintains a strong oil film to reduce the heat caused by friction and protect the moving parts from metal-to-metal contact, which could result in high wear levels.

"The lubricant will also absorb the heat generated by



friction and carry it away from the moving parts, giving the oil sufficient time to cool and regain its optimum viscosity," says Launspach.

A second major problem resulting from high temperatures is the fact that the oil reacts with the oxygen in the atmosphere and causes the oil to oxidise, which increases the viscosity of the oil.

Over a period of time the oxidation process accelerates, reducing effective lubrication to the moving parts and reducing energy. This process is combatted by specific additives that slow down the process of oxidation.

## 2. Clean

"Engine oils also contain additives that help them to clean the soot resulting from the combustion process, and hold it in suspension until it can be filtered out of the system. This process is called detergency and dispersency, and allows the quality and efficiency of the oil to be maintained for longer," explains Launspach.

## 3. Corrosion

Special anti-corrosion additives protect the engine from corrosion caused by poor-quality, high-sulphur diesel. During the combustion process, the sulphur combines with the moisture and oxygen in the air and forms sulphuric acid.

"This acid is highly corrosive and it attacks all metal parts with which it comes into contact. The oil's ability to combat this corrosion, which is indicated by the total base number (TBN), will be effective for a period of time," says Launspach. He advises that fleet owners always ensure they use the best-quality diesel available, or reduce the drain intervals when operating in areas where diesel quality is poor.

## 4. Fuel dilution

In an engine, fuel can wash past the piston rings and contaminate the motor oil, causing it to lose viscosity. "Frequent short trips that don't allow the oil to reach normal operating temperature can be especially

problematic, because the fuel won't volatilise and exit through the positive crankcase ventilation (PCV) system.

"Excessive fuel dilution leads to sludge and varnish, requiring the oil to be changed more often," explains Launspach.

## 5. Additives

Very importantly, the oil is also the carrier for the many critical additives that give it the special qualities that enable it to perform as required by the engine manufacturer, with a suitable safety margin.

## CAN OIL BE RE-REFINED?

Launspach advises against this practice. The process required to produce higher-quality base oil from a conglomeration of numerous used lubricants (which contain remnants of various additives, wear metals, water and high levels of oxidised oils) requires highly specialised equipment. While lubricants manufactured using re-refined base oils are generally cheaper, it is hard to know the precise quality of the re-refined product.

## DO TRANSMISSION OILS DIFFER SIGNIFICANTLY?

Many of the requirements for transmission oils are the same as for engine oils, but with less of a focus on high temperatures and protection from harmful combustion products.

"The most critical function of a transmission lubricant is to keep moving parts apart in order to reduce wear, thereby reducing the friction that results from metal to metal contact," says Launspach.

"All of the factors mentioned above – specifically with regard to the importance of following the original equipment manufacturer's recommendations in terms of the use of approved lubricants, including a lubricant manufactured with the specified quality base oil and observing the specified drain intervals – are vital for the protection of your transmission," he adds. **F**

# Trailer safety **IS VITAL!**

**FOCUS** delved into the problem of poor trailer maintenance in the second issue of the year. This time around, VIC OLIVER offers some practical advice for fleet operators to use in the workshop

**D**rawbar and semi-trailer maintenance is poor in many fleets. Often the only time that the trailer gets a good inspection and service is when it is being prepared for the yearly Certificate of Fitness test – or when the trailer breaks down along the road.

To ensure that trailers remain in a healthy, roadworthy and safe condition they need to be inspected and serviced regularly.

A poorly maintained semi-trailer can damage the truck tractor – or, in the case of a drawbar, the rigid truck – that is pulling the trailer. This applies particularly when coupling an old trailer to a new vehicle.

If the trailer brakes are not working correctly, the truck will have to do all the braking, which will result in excessive brake wear. Similarly, if the trailer's wheel

alignment is not set correctly, the truck will have to work harder to move the rig in a straight line and it will use more fuel.

Well-maintained trailers eliminate expensive roadside breakdowns and enhance vehicle productivity. There are a number of critical items and components on trailers that need to be checked and serviced regularly. These include:

### **RUBBING PLATE AND KINGPIN**

On semi-trailers the rubbing plate needs to be checked to ensure that it is not bent or scored, as a damaged rubbing plate will quickly damage the fifth wheel. This could result in it having to be replaced long before it would normally be necessary.

Check the kingpin for wear and regularly clean and grease the rubbing plate and kingpin.



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### TOWING DRAWBAR

On drawbar trailers the drawbar, tow-hitch eye and pin must be inspected regularly. Also clean, grease and check the trailer turntable.

### BRAKES

The following components of the brake system need to be checked:

- Brake lining or pad thickness;
- Brake lining to drum clearance, the linings must also be in contact with the drum when the brakes are applied. Adjust slack adjustors if necessary;
- The cables of the ABS system (if fitted) must be connected and the system must be working;
- Brake slack adjusters and camshafts operations;
- All Suzie hoses and all brake piping connections;
- The load-sensing valve and connections;
- Any air leaks in the system.

Furthermore, the emergency trailer brakes must be checked by disconnecting the red emergency Suzie hose: the emergency brake should be activated immediately.

Drain the air-tank reservoirs of any water (this should be done daily by the driver). Clean and grease all brake operating parts and test the brakes on a brake roller tester (if available).



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## TRAILERS



Well-maintained trailers will eliminate expensive roadside breakdowns and enhance vehicle productivity.

### WHEELS AND SUSPENSION

Check all tyres for damage and excessive and abnormal wear. Tyres must be inflated to the correct pressure and valve caps must be fitted. Examine all wheel rims and fastening nuts; all wheel nuts must be correctly torqued.

Check suspension and shock absorbers. Replace worn or broken parts.

### WHEEL BEARINGS

Check all wheel bearings for play and adjust where necessary. Service and maintain according to the axle manufacturer's recommendations.

### WHEEL ALIGNMENT

Regularly check and adjust wheel alignment. A quick tip, regarding tandem and tri-axle units, is to measure the distance from the front rim to the rear rim on one side of the trailer. Now compare the same distance measurement on the other side of the trailer. If the distance is not the same, the wheel alignment of the trailer will need to be professionally measured and adjusted.

### ELECTRICAL

All electrical wiring must be in good condition and all lights and indicator lamps must be working. Remember to also check the electrical Suzie connection.

### UNDER-RUN BUMPER AND CHEVRON

The rear under-run bumper and chevron must be fitted and must comply with the legal specifications.

### REFLECTIVE TAPE

Reflective tape must be fitted and should be clean of dirt and grime. **F**



One of this country's most respected commercial vehicle industry authorities, VIC OLIVER has been in this industry for over 50 years. Before joining the FOCUS team, he spent 15 years with Nissan Diesel (now UD Trucks), 11 years with Busaf and seven years with International. Do you have a comment or thought you would like to share based on this column? Visit [www.focusontransport.co.za](http://www.focusontransport.co.za) and have your say!



# The new ECO Plus 3 is here.



## New Hub Design

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The New 9 ton ECO Plus 3 replaces the current 9 ton ECO Plus 2 version for single wheel application. All dual wheel applications remain with the current 10 ton ECO Plus 1 axle design.



TANKERS



# TANKERS

to outperform  
any competition

Colt Energy will soon receive 20 new tankers, which use state-of-the-art technology to outperform competitors with a shorter offload period

**C**olt Energy, a level-one BBBEE-owned and managed company, was established in 2015 with the focus on transportation and logistics within the bulk liquid-fuels sector, with its key competency on professionalism and service excellence. Colt Energy was founded and is chaired by Gregory Richardson, the owner of Colt Logistics, after realising the existence of a market gap in the liquefied fuel and gas sector.

made use of second-hand tankers. It bought its first two new tankers from Tank Clinic that same year. At the time of being awarded the tender in 2016, Colt Energy was operating a fleet of nine vehicles.

"After some good feedback on Tank Clinic's research and development on new tankers, Colt Energy ordered 20 tankers from the company," says Steven Holm, technical director at the tank manufacturer.

This was, however, not the only motivation for Colt Energy to approach Tank Clinic. "When we decided to purchase new tankers, we approached all the major tank manufacturers in the country. Tank Clinic was the only one that took us seriously as a potential new customer. It engaged with us on a different level compared to its competitors," says Stefan Heling, the managing director at Colt Energy.

The vehicles provided by Tank Clinic have been designed to adhere to the latest EN specifications prescribed by local legislation.

"The tankers are further enhanced by using the most modern and efficient loading and offloading tanker equipment. The flow rates delivered by the new Alfons Haar meter systems far outperform any of the competition in the industry. The result is a tanker with a greater capacity, which can offload its contents in a shorter period of time," notes Holm. **F**

In 2016, Colt Energy was awarded part of the Easigas tender for transportation of liquefied petroleum gas (LPG). Colt Energy then approached the tanker manufacturer Tank Clinic to supply 20 new tankers, with the most modern and efficient offloading equipment, for its LPG, Butane and propane requirements.

When Colt Energy started operating in May 2015, it



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## The right **REPAIR**

How can one ensure that vehicles, which have been damaged in accidents, are repaired using quality replacement parts? GAVIN MYERS finds out from the South African Motor Body Repairers Association (Sambra)

**E**dwin Martin, national director at Sambra, and Randall Langenhoven, regional manager at Sambra Western Cape, are straightforward with their assessment of some aftermarket replacement parts in circulation.

The parts could be manufactured from non-virgin materials and have general form and fitment issues, where panels don't align properly or have the correct mounting points. This results in repairers having to make certain adjustments to manipulate these panels to fit the vehicle.

"The parts may look similar, but differ greatly in their fitment and function," Martin says.

This is most important when safety-critical components are in question – such as light clusters.

"For example, the mechanisms and reflectors in headlamps may not focus the light in exactly the same way as the original part, while indicator or brake lamps may last for only six months before they fade and discolour. If these lights are not visible, accidents can result," he adds.

The reasons for consumers choosing to fit aftermarket parts is, naturally, the cost difference between these and original parts. Martin advises that this practice should be strictly avoided when safety-critical components (including lights and mechanical components) are required.

"However, if the consumer is prepared to suffer a reduced market value on the vehicle, they are free to choose aftermarket cosmetic parts," he says with trepidation. "The important thing is to determine the origin of the part."

"It's always been known that certain parts from certain suppliers are of better or worse quality. If the consumer has knowledge about the origin of the parts they can make an assumption about the

quality, but most of the time it's the insurer that tells the repairer where to obtain the parts. That's a challenge we have in the body repair industry," says Langenhoven.

Martin elaborates: "For vehicles within warranty, the original equipment manufacturer (OEM) specifies that only original parts can be used. The challenge is with vehicles out of warranty, as insurers have a tendency to request aftermarket parts whenever possible."

Martin advises that, under such circumstances, one cannot hold the repairer responsible if the instruction comes from the insurance company that is covering the cost of the repairs. "As the insured owner of the vehicle, however, you can take it up with the insurance company and insist on the fitment of original parts.

"Although insurance companies tend to profess that all these parts are of equal quality, this is seldom actually the case," Martin adds.

What about a good old-fashioned panel beating repair, as opposed to replacing the damaged parts? This still exists, but is often a matter of economics.

"If the damage is of such a nature that it can be safely and adequately repaired, the instruction would come from the insurer to do so. If the part is not locally available, however, the decision to repair could be taken, so as not to leave the client without a vehicle for an extended period of time," Langenhoven says.

For peace of mind, vehicle owners can ensure their repairer is accredited by Sambra – which means they subscribe to a code of ethics and undergo an annual grading to ensure they meet the necessary requirements to affect a safe and good repair. Should the owner have any concerns, he or she can contact their respective Sambra regional manager. **F**

# Importance of warranties in a “JUNK” ECONOMY



With ratings agencies Standard & Poor's and Fitch having downgraded South Africa's sovereign credit rating to "junk" status, warranties have become ever more important to fleet owners. ANLERIE DE WET finds out how they can benefit the local transport industry

**T**he downgrade of South Africa's credit rating will affect the consumer's pocket in every possible way. The cost of imported goods will increase as the rand weakens, and interest rates on insurance and loans will increase, too. South African businesses – including fleet owners and original equipment manufacturers (OEMs) – will be negatively affected financially.

Mark Williamson, MD of Warranty Solutions, says that, in general, vehicle parts have become more expensive worldwide over the last few years and, if the rand depreciates, vehicles without warranties will start gathering dust.

"The high price of imports and the falling value of the rand are the two main reasons that vehicle owners without warranty plans could struggle to

keep their vehicles on the road," says Williamson.

He adds that even before the downgrade operators struggled to afford the cost of vehicle repairs.

"If a vehicle has a general breakdown now, the repair costs could be as much as paying for repairs after an accident. Owners won't be able to repair their vehicles and they will just stand," says Williamson.

"Some vehicle owners think they can simply mitigate their risk with a comprehensive insurance policy, which only covers damage to a vehicle as a result of an accident. But they also need a warranty in order to negotiate lower prices for parts and repair services attributed to general wear and tear," explains Williamson.

Dave van Graan, head of special sales projects at MAN Truck & Bus South Africa, says that buyers of



such as engine, transmission and drive axles – can be very costly to operators that experience such failures during the first economic life of the vehicle – especially if repair costs have not been budgeted for, and where the failure occurs despite the proper use of the vehicle," says Van Graan.

He adds that one of the most important aspects of a warranty is the ability of the OEM and its authorised dealer network to diagnose warrantable failures and make the required repairs speedily.

"This means that the dealer network needs to have made the necessary investments into facilities, parts, diagnostic equipment, tools and trained people – and that the costs of the respective repairs need to be channelled appropriately to the correct area of the business responsible for such repairs."



**The high price of imports and the falling value of the rand are the two main reasons that vehicle owners without warranty plans could struggle to keep their vehicles on the road.**

new trucks and buses benefit from standard factory warranties in that their vehicles are then guaranteed to be of good quality.

"These warranties provide peace of mind as all parts used in the assembly of the vehicle, as well as the labour directly associated with such assembly in the original factories, are free from defect," says Van Graan.

"These warranties enable the customer to claim for the replacement of a defective part or faulty workmanship, should an unplanned, warrantable failure occur within the warranty period."

According to the Section 58 of the Consumer Protection Act, all goods must have at least a six-month warranty period, in which the consumers can choose to either repair, replace or be refunded for the purchased products.

Van Graan says that warranties can make a big difference to the pockets of truck and bus owners, as they generally cover the complete vehicle during its first year of operation, and expensive driveline components for up to five years.

"Premature failures of driveline components –

Van Graan says the reason why warranties are important to OEMs such as MAN Truck & Bus – which offers a full range of standard and extended warranties – is because they give consumers confidence in the brand.

"Warranties show confidence in the design integrity of our products, and provide additional peace of mind for our customers who wish to manage their running costs more precisely in their specific operations," says Van Graan.

He says the OEMs also offer warranties that are specifically tailored to individual customer's needs, which means they will not need to pay for add-ons that are not applicable to their particular situation.

Williamson adds that OEMs can also utilise warranties to build customer trust in the quality of their brand. "With warranties, OEMs can generate more hype about a product and build a relationship with customers during the fixed running time of the warranties – and be more competitive during a very difficult economic time," he concludes. **F**



**INNOVATION  
AHEAD**

# A CONVENIENCE

card with checks and controls

Altech Netstar has launched its on-road fleet expenditure solution designed to simplify transporters' daily financial requirements. Introducing the Vigil Fleet Card

**C**ards are not a new phenomenon in transport... they have been around for a long time and most banks offer a basic fuel card, which can be used for other simple expenses, such as fuel and tolls. However, traditional fuel cards have limitations and cannot be used for incidental on-road expenses. Many also have limited cross-border use due to forex requirements. Controlling expenditure and preventing abuse of fuel cards can be problematic and difficult to manage.

"Managing on-road expenses therefore becomes quite a challenge," says Lawrence Wordon, executive sales and marketing at Altech Netstar.

"Besides fuel and toll expenses, long-distance transport operators have to provide for meal expenses and daily allowances for drivers and crews, as well as truck port charges. It is even more difficult to control unforeseen expenses; for example, if a driver is delayed and needs to spend an extra night on the road.

"Unforeseen maintenance breakdowns, such as punctures or tyre repairs, add to the financial stresses that accompany a typical transport operation. Budgeting for these expenses is a challenge and operators are often left with no option but to issue a cash float to the drivers to pay for unforeseen expenses," says Wordon.

The days of onerous and admin-intensive money management are numbered, however, thanks to Altech Netstar and its Vigil Fleet Card.

"While fuel remains one of the main on-road expenditures, the Vigil Fleet Card can be used for far more than fuel," Wordon explains. "It is a very secure, on-road payment solution."

Developed in partnership with systems integration company, DMG, and in collaboration with Mercantile bank, the Vigil Fleet Card is a Mastercard mag-strip, prepaid card that can be integrated with the transport operator's internal finance operation. Altech Netstar facilitates the entire application and administration process.

Wordon explains: "The customer is established as the custodian of a master trust account, from which funds can be transferred onto driver cards that are linked to the master account via an online portal. Each driver card can be loaded with an amount selected by the customer. Funds can be moved onto and off the card from the trust account via the easy-to-use online portal.

"Each driver card has a unique driver identification PIN number. Once funds are allocated to the card, the drivers are able to utilise it to pay for on-road expenses via the Mastercard-accredited card payment network. PIN access, together with on-off technology, is required to authorise payment via the card. The cards can also be authorised to draw money at the banking ATM network," he adds.

The Vigil Fleet Card system has the ability to limit card usage to a select network of vendors, further increasing the security parameters controlling the use of the card.

"It's an exciting development tailored specifically for the fleet-transport environment," Wordon reiterates. "Eventually we'll be able to offer a 'menu option' for customers to customise their own card payment solution on a case-by-case basis."

As each phase of the system rolls out and workflow processes are put in place with each customer, the Vigil Fleet Card will also become increasingly integrated with other Altech Netstar products and services.

"For example, we plan to integrate the card payment solution with our telematics system so that the authorisation of refuelling can be achieved via the fleet management system. In addition, if the telematics GPS

coordinates don't match the vendor GPS code, the transaction will be declined," says Wordon.

"Further card security parameters are also planned, including pre-authorisation SMS approval requests; where the customer's fleet control room can validate the vehicle's telemetry information to see that everything checks out before a transaction is authorised.

"We're starting off with a simple, very secure solution aimed at addressing our customers' immediate on-road expense needs. We will continue to partner with our customers and expand the solution around their evolving requirements," Wordon elaborates.

The system has been in the pilot stage for more than 12 months with three external fleets and with Altech Netstar's own fleet of over 200 mobile fitment vehicles. The company also researched the concept with a cross spectrum of long- and short-haul fleets at the beginning of its development. Thus far, customer reaction has been most positive. "There is a peace-of-mind factor for both the drivers and management," says Wordon.

What is the cost of this security and convenience? "The customer pays a fixed monthly rate for the card, which includes transaction fees, as opposed to traditional banking cards that charge per transaction," Wordon explains.

"The Vigil Fleet Card solution is a good example of how we listen to our customers and continually seek ways to exceed their expectations by providing market-leading technology solutions," Wordon concludes.

No, cards are not a new phenomenon in transport ... not unless you are talking about this card! **F**



# Two blinging **BAKKIES**



Two of South Africa's favourite bakkies, the Isuzu KB and Nissan NP200, have recently received an update (Isuzu) and special model addition (Nissan). GAVIN MYERS drives them

## IMPROVED ISUZU

When it was launched in 2013, one of the biggest criticisms of the Isuzu KB was its rather harsh ride quality. This was something that kept rearing its head whenever we would test drive any model of the range; an observation made even worse by the continual barrage of competition with ever-more supple ride quality.

With this midlife facelift, the engineers at Isuzu South Africa went back to the drawing board and set about rectifying this problem, covering more than 100 000 km in testing. The result was the fitment of revised rear dampers on 4x4 models (as was our KB 300 D-TEQ double cab test unit), while 4x2 models received updated front dampers as well.

The engineers have managed to make the ride more supple for the every-day commute, but on harsh, corrugated roads occupants will still get shaken about more than in some competitors' vehicles, while the rear is still inclined to skip about a little on harsh surfaces.

What else is new? Well, the KB has come in for a little nip-tuck, with sharper lines giving its façade a more aggro appeal, while more detail has been added to the rear tailgate. LX models receive integrated LED daytime running lights and blingy 18-inch wheels.

Buyers of LX models will also enjoy the tow bar, sports bar and roof rails that are now standard.

Also standard are the electric seat adjustment and 6.5-inch, high-definition, touchscreen infotainment system – which offers features such as navigation, internet and a DVD player.

The updated Isuzu KB 300 D-TEQ 4x4 Auto retails for R563 500 and features Isuzu's Complete Care aftersales backup. The upgrades have brought it in line with the competition, even though it doesn't lead the pack.

## (N)ICE NISSAN

Nobody could ever accuse the Nissan NP200 of not being among the most popular bakkies on the local market ... but that hasn't stopped Nissan from releasing another limited-run, special-edition version.

Dubbed the "ICE", buyers get themselves a host of added features with this new model. Unique 15-inch alloys are an eye-catching addition, while an aluminium nudge bar and sports bar in a brushed, textured finish add a touch of machismo.

Out back, the rear load bay is also rubberised as standard on this model, while a tonneau cover adds a layer of protection to items in the load bay (although the tailgate is not lockable).



Rounding off the styling package is dark, tinted safety film on the (manual) windows, as well as LED daytime running lights.

Inside the cab, occupants are treated to leather upholstery and practical rubber floor mats – but the rest is standard NP 200 fare.

The price? Buyers of the 64 kW/128 Nm 1.6 8V will pay R191 900, while those opting for the 63 kW/200 Nm 1.5 dCi will look at R204 900. Both, however, are offered with an impressive six-year/150 000 km warranty. A service plan is optional. **F**



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## Safety training: **A REAL LIFESAVER**

Something needs to be done to decrease the number of injuries resulting from the increasing number of road transport accidents. ANLERIE DE WET investigates whether safety training could be a possible solution

**A**ccording to the Occupational Health and Safety Act, Section 8, an employer has the duty to inform employees of the hazards and risks associated with their tasks, and what control measures have been implemented to minimise their exposure to incidents as well as the severity and consequences thereof.

Ockert Fourie, Gauteng regional director at Makrosafe, says safety training creates awareness – a very important tool with which to combat accidents. "Safety training is also a vital tool in improving employee health and safety awareness and making all employees aware of their duties, responsibilities and roles in relation to health and safety," says Fourie.

Makrosafe offers the legally required safety training

such as health and safety representative training, first-aid, basic firefighting, incident investigation and legislation training, as well as task-specific training for companies in the transport industry.

The task-specific training includes training in hazardous chemical substances and safe operating procedures with regard to pre-use operations, driving vehicles, loading and off-loading operations and work instructions.

"Makrosafe also runs information training sessions in the form of safety alerts such as hijacking prevention and journey management, which are tailored to suit each individual client and their specific needs," says Fourie.

This type of safety training can help decrease: motor vehicle accidents (by training drivers to perform pre-use vehicle inspections); loading and off-loading

Kingdom, anecdotal evidence suggests that as many as 60 percent of truck accidents in Africa may be due to driver fatigue. Driver fatigue is the most likely cause of death of a truck driver in a road accident and is the most likely reason for the write-off of a truck.

Francois Riekert, national risk and security manager at Scania Southern Africa, says: "An injury to just one employee is unacceptable. We are trying to get to a point where employees look after each other, while also looking after their own well-being, so that we have zero incidents."

Riekert says a safe working environment is a core necessity for Scania to be able to operate efficiently. He says Scania's values include putting the client first, respect for the individual and eliminating waste. For this company safety training begins at home, before the lessons learnt are passed on to the consumer.

Riekert says Scania has an induction programme that highlights the need for safety, health and environment (SHE) training, and awareness of the necessity of implementing SHE principles.

"Every training session has a section that covers SHE. We also have SHE committees that assist management with the identification and elimination of risk and unsafe working conditions," says Riekert.

He explains that the safety training covers safe operating processes and the basics of what an employee should do in case of an emergency, which includes first aid and firefighting.

Riekert says when Scania's driver trainers train its clients' drivers they include a section on how to react in case of an emergency and how to be a safer driver.

Fourie says SHE representatives or managers need to receive training at least once a year, or when there are changes to legislation, in order to ensure adherence to updated legislative requirements.

Mornè Stoltz, head of business insurance at MiWay, says that fleet managers and logistics companies should consider a multi-faceted approach to get drivers to take road safety seriously, which would better manage drivers' needs for sufficient rest and advanced driving instruction.

"It has been proved that initiatives like these reduce the number of accidents in which professional logistics companies are involved, which brings considerable benefits to these companies," says Stoltz. **F**

incidents; and driver fatigue, (by training drivers to effectively manage journeys).

*Arrive Alive*, the online road safety initiative, says fatigue-related accidents are known to be a particular problem for truck drivers. According to the Loughborough Sleep Research Centre in the United

To fit or not to fit, is

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# Down with **LOGISTICS COSTS**



Despite being a leader in transport and logistics among middle-income countries, South Africa needs to reduce its logistics costs – especially in the agricultural sector, which sit at R189 billion. MARISKA MORRIS investigates

In 2016, logistics made up 11,8 percent of South Africa's gross domestic product, and amounted to approximately R499 billion. Transport costs formed the largest portion of the logistics sector, at 55 percent, with land-freight transport volumes at 856-million tonnes by the end of 2016.

According to the *Logistics Performance Index*, published by the World Bank, South Africa is a leader in transport and logistics among middle-income countries, but its infrastructure remains a challenge, which is common among BRICS countries

(comprising Brazil, Russia, India, China and South Africa).

"The country has long inland transport distances, relies heavily on non-beneficiated exports and has a much smaller economy than the other BRICS countries, which is also growing more slowly than most.

"South Africa is, therefore, vulnerable to external shocks, and reducing the cost of logistics needs to be a priority," Professor Jan Havenga, from Stellenbosch University, and his co-authors write in their 2016 *Logistics Barometer* report.

distribution, low-density freight, seasonal patterns and a low rail market share.

While it is unknown how much farmers spend on contracted transport, deputy executive director at Agri SA, Johan Pienaar, estimates farmers spend around R12 billion on fuel annually.

"Changes in the fuel price and the cost of road tolls impact transport costs to a large extent – especially for farmers who deliver fresh produce. Although not quantifiable, the poor condition of infrastructure in many areas leads to vehicle damage and increased maintenance costs," Pienaar notes.

While grain production is expected to be higher this year, the lower grain prices will not help to ease transport costs for the agricultural sector.

Despite the drought and armyworm infestation, figures released in February, by the Crop Estimates Committee, predict South Africa will harvest 13,9-million tonnes of maize in 2017, which is a 79-percent increase in production from 2016. South Africa is expected to regain its status as net exporter in May.

While the increase in production will motivate buyers, the price of maize has dropped significantly. In early 2016, white maize and wheat traded at R5 000 per tonne, due to concerns about the drought. With the new estimates made by the Committee, the price of white maize for July delivery will have fallen to R1 932 per tonne in March.

"Shipping costs will, obviously, have to be accounted for with respect to exporting surplus grain. The fact that there is no need to import grain will lead to cost saving for the industry, but not for the grain farmers," he comments. "Instead, these farmers, especially those who did not adjust their prices before planting, will struggle with lower earnings."

Currently, only three percent of agricultural products are transported by rail. Havenga suggests that the increase in grain production could be a good opportunity for farmers to make use of rail to save on transport costs.

"Higher grain volumes create better opportunities for rail block trains, which can reduce costs. It also means, however, that the transport component of grain delivery will be relatively higher in a low-cost commodity environment," Havenga says. He also suggests redirecting some of the national road expenditure to improve rural road networks.

"Improved infrastructure will decrease the overall cost of transport for all products, provide better access to markets for farmers in rural areas and support efforts to create more commercial farming opportunities for subsistence farmers." This will, arguably, also reduce vehicle maintenance costs for farmers. **F**



Improved infrastructure will decrease the overall cost of transport for all products, provide better access to markets for farmers in rural areas and support efforts to create more commercial farming opportunities for subsistence farmers.

This is especially true for the agricultural sector. Along with mining, agriculture was responsible for 76 percent of the total land-freight volume in 2016. The industry transports 83-million tonnes of agricultural products annually – which represents ten percent of the total freight volume in the country.

"The transport costs for agriculture amount to R57 billion, which is 21 percent of the total for South Africa. Logistics costs are even higher at R132 billion, which is more than 26 percent of the total for the country," says Havenga. These high costs are affected by circumstances such as



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## HOWO Mining King

- 11.6-litre engine
- 246 – 328 kW (330 – 440 hp)
  - Euro 2 – Euro 3
- 9, 10 and 12-t front axle
- 16 and 26-t hub-reduction rear drive axle
  - 70 000 kg
  - 30 and 60 m<sup>3</sup>



## HOWO 7 6x4/8x4 Tipper/Mixer/Tanker

- 9.7-litre, 6 cylinder in-line
- 216 – 250 kW (290 – 336 hp), 1 160 Nm
  - Euro 2/Euro 3
- Sinotruk synchromesh transmission – 10 forward, 2 reverse gears
- Dual-circuit compressed air brake, exhaust brake, ABS
- Gross Vehicle Mass (GVM) 41 000 – 50 000 kg
  - Permissible Maximum Vehicle Mass (V) 25 000 – 35 000 kg



## HOWO V7G 6x4 Long Haul

- 10.5-litre, 6-cylinder in-line
- 316 kW (430 hp), 2 100 Nm
  - Euro 3
- ZF synchromesh transmission – 16 forward, 2 reverse gears
- Dual-circuit compressed air brake, exhaust

- brake and ABS
- Vehicle Tare Mass 9 030 kg
- Gross Vehicle Mass (GVM) 32 000 kg
- Gross Combination Mass (GCM) 65 000 kg
  - Permissible Maximum Vehicle Mass (V) 25 700 kg

## All-wheel Drive 4x4, 6x6, 8x8

- 9,7 and 11,6-litre engines
- 198 – 313 kW (266 – 420 hp)
  - Euro 2
- 10 or 12 speed manual transmissions
- Double-reduction rear drive axle

# The future BEGINS NOW

It's not a question of whether regulations for greenhouse gas emissions will come, but, rather, when. Two degrees of global warming are enough and the implementation has to start quickly. What impact does this have on the transport sector? Some answers already exist, writes FLORIAN ENGEL from *1Truck*, Austria's leading commercial vehicle magazine

**T**he diesel engine is clean and efficient like never before. It has a 99-percent share in the transport sector and is the perfect solution for the complex and demanding tasks of a truck. A new fuel is on the cards, however, in the form of liquefied natural gas (LNG); earth or biogas liquefied at -162° C.

Does this mean we are on the verge of a drive revolution, or is it, once again, one of the many alternatives that have been announced, but have never really gone beyond the concept stage?

## THE BACKGROUND

It was decided at the United Nations (UN) Climate Conference in Paris, also known as COP21, in December 2015, that greenhouse gas emissions have to be practically reduced to zero by 2045.

This means that the entire energy supply must be converted to renewable energies by 2040 at the latest. This also includes transport. According to UN experts, the implementation has to start by 2020, or, realistically, there will be no chance of meeting the two-degree limit by 2045.

Many companies have clearly defined their goal – to operate CO<sub>2</sub> neutral. Of course, transport plays an important role here.

## THE CHALLENGE

In city buses the ratio of diesel to gas engines is

already balanced. When doing short daily trips it is easy to cope with compressed natural gas (CNG) tanks, without having to think too much about the range.

The CNG engines are quieter than diesel engines and emit less CO<sub>2</sub>. The balance is dramatically improved when biogas is used. Distribution trucks running on natural gas have been operating for years.

Long-distance transport also needs to play a part, however. Although electrically powered trucks could provide an acceptable range and payload, this system is still unaffordable. Solutions with fuel cells are available in the development drawer – however, there is a massive lack of infrastructure.

LNG is currently the simplest solution to implement. When natural gas is liquefied at -162° C it is 600-times smaller than CNG. This means that, at maximum tank capacity, it is already possible to achieve a range of up to 1 500 km.

## LNG PIONEERS

The Dutch Iveco importer Schouten recognised the potential of LNG years ago. It has developed and built its own LNG filling stations through its subsidiary Rolande, which is at present the largest LNG fuel station operator in the Netherlands, with six stations. Shell and Total have also jumped on the bandwagon and are moving aggressively into LNG. The large mineral-oil companies do not like it, however.





The big question, therefore, is whether the latest generation of trucks is ready for the revolution. Together with the new XP, Iveco has also presented the new Stralis NP. NP stands for natural power and aims at the possibility of virtually CO<sub>2</sub>-neutral driving through the use of biogas.

Is the LNG system workable? Will the performance of LNG trucks be sufficient? What will the drivers say?

**FIRST ANSWERS**

Let us approach the subject very simply. The first impression usually counts. Here the Iveco Stralis NP definitely scores points. There is no doubt that the large Hi-Way has been developed for the long haul. The spacious driver's cab also satisfies demanding drivers.

**TECHNOLOGY LEAP**

The 8,7-litre Cursor 9 engine, specially designed for the use of gas, delivers 298 kW (400 hp) and 1 700 Nm of torque, which means that it's equivalent to a diesel version. The combination with the automated Hi-Tronix 12-speed transmission, which is known from the normal Stralis, offers maximum comfort.

Up to now, combining gas engines with automated gearboxes has been problematic. Even though it is not the latest-generation TraXon transmission, the ZF transmission can certainly offer shift comfort and perfection.

The gas engine is considerably quieter than the

and 1 700 Nm of torque cannot be expected to deliver overwhelming power. It tracts properly, despite three-quarter loading, but gear switching is more leisurely than the new XP. Having said this, this does not constitute an obstacle in real operation.

Instead of a diesel noise from the exhaust, the LNG Stralis produces rich sound under load – a real pleasure.

Iveco promises fuel savings of up to 15 percent and up to 35-percent reduction in fuel costs, depending on the tax burden. Overall, the total cost of ownership



**LEFT:** The new Iveco Stralis NP is the first dedicated gas-powered truck for long-distance use.

**ABOVE:** The filling process itself is relatively unspectacular.

(TCO) will be seven-percent lower when compared to a diesel vehicle.

**FIRST LARGE ORDERS**

The French transport company Jacky Perrenot, has already deployed 50 LNG Stralis trucks since 2010. Recently, another 200 of the latest generation have been added. According to the company, the use of the LNG fleet has resulted in a 5,6-percent reduction in total cost of operation and the maintenance and service costs have been reduced by up to ten percent.

**CONCLUSION**

The potential of LNG can no longer to be dismissed, particularly with regard to the COP21 agreement and the CO<sub>2</sub> tax in question.

Rolande, an LNG pioneer, is expected to have a fleet of 10 000 LNG trucks in Europe by 2020, for example, supplied by approximately 100 filling stations on their routes. **F**



current whisper-quiet Euro-6 diesels. The operation of the LNG Stralis is not a challenge: release the parking brake, select drive and start.

**THE EXIT**

Of course, a nine-litre engine with 400 hp (298 kW)

As regular readers of **FOCUS** know, this magazine has been appointed an associate member of the International Truck of the Year (IToY)! **FOCUS** is the sole South African magazine to have joined this prestigious body. One of the advantages of this association is access to exclusive articles, specially written for **FOCUS** by ITOY jury members. This is one such article.



# REVISED TOLL LAWS

impact the transport sector

The European Commission is embarking on a revision of European road tolling laws this month (May). MARISKA MORRIS investigates how these revised laws will affect the transport industry in Europe

**T**he European transport industry will start paying distance-based tolls in more European Union (EU) countries if the European Commission's (EC's) proposed change to toll laws is passed. The change will certainly please environmentalists...

A similar bill has recently been passed in Germany. The original road charging system, which was approved by parliament in 2015, would have charged tolls only to foreign vehicles. The EC challenged the bill as it was considered discriminatory to foreigners travelling in Germany.

The revised bill, which was introduced in March, will charge all road users travelling in Germany. Vehicles producing less pollution will pay lower toll rates. According to the website *Euractiv.com*, the maximum annual cost for a foreign driver will be €130 (R1 918) with an estimated €500 million (R7.3 trillion) collected annually from foreign vehicles.

Since 2005, trucks of 12 t or more have been tolled electronically by Toll Collect, a German toll-collection

company, which uses radio and satellite technology. Following the introduction of the new bill, trucks weighing 7.5 t now also pay tolls. It is expected that buses and 3.5-t trucks will start paying tolls in the coming months.

Daniel Delhaes, journalist at *Handelsblatt Global*, notes that "from summer 2018, trucks can expect to pay tolls on all federal roads" in Germany.

The EC is motivated to implement its kilometre-based tolling systems as part of its commitment to reducing harmful emissions. Despite attempts by the transport sector to reduce harmful emissions, heavy-duty vehicle emissions rose by 36 percent between 1990 and 2010 due to increasing road traffic.

In her article for *Euractiv.com*, journalist Catherine Stupp notes: "Trucks, buses and coaches produce about a quarter of the CO<sub>2</sub> emissions from road transport in the EU and some five percent of the EU's total greenhouse gas emissions – a greater share than international aviation or shipping."

In addition to the new method of charging tolls, the EC will also be revising a law introduced in 2004,



which encourages all EU countries to use the same technology to charge tolls. Currently EU countries use satellite, mobile communications or microwave technology to charge tolls.

"Transport operations are largely cross-border, which is why we need common rules in all EU countries," said Violeta Bulc, EU transport chief, at the 2016 Road Transport Conference. Currently truck drivers carry up to ten or more different tolling devices when travelling between countries.

Since 2012, 60 percent of the 72 000 km of tolled roads in Europe have used electronic systems for charging tolls. The rest use vignette stickers which are valid for ten days, two months or one year. Some countries, such as Portugal, Spain, France and Belgium, have successfully introduced unified tolling devices that allow drivers to cross the borders of these countries seamlessly.

Stupp notes that the companies that produce electronic tolling systems, such as the Telepass in Italy and Via Verde in Portugal, struggle to implement a single tolling device because of the tough standards

set by the EC, the challenge of combining the various technologies and the highly competitive market.

"Drivers can subscribe to any toll provider, so EU-wide operators compete for business, but there aren't enough drivers signed up, so competition is sparse," Stupp comments.

Even countries that use the same technology struggle to implement a unified tolling system, as they need to negotiate the terms of use. Belgium and Germany, for example, both use satellite technology, but still use different methods to charge road users.

Road authorities believe that electronic tolls could reduce fraud and could bill drivers who have thus far managed to avoid paying tolls.

A single, electronic toll system would make it more convenient and cheaper for vehicles to travel between EU countries and transport companies would no longer need to comply with the different laws of the various countries. It would be especially advantageous for those transport and logistics operators that cross borders on a daily basis. **F**

# GLOBAL FOCUS NEWS

## DRIVER? WHAT DRIVER?

Can you imagine climbing into a bus and noticing that it has no driver? This could soon become commonplace in Japan...

The French electric vehicle start-up, Navya, is aiming to bring its driverless bus to sites such as shopping centres, airports and university campuses in Japan, with the intention of delivering low-speed shuttle services that would run along fixed routes.

With just three years to go until the 2020 Tokyo Olympics and Paralympics, the vice president of Navya, Henri Coron, expressed his excitement over the innovative project, saying that the company aims to connect Tokyo subway stations with Olympic and Paralympic venues using its self-driving buses.

In 2015, Navya completed the manufacture of its driverless bus, which can travel at a maximum speed of 45 km/h and carry up to 15 passengers. Currently, there are 30 Navya self-driving buses operating in a total of seven countries including France, the United States and Switzerland. Testing of two buses is now about to begin in Japan.

In some ways, Navya's driverless bus is different to self-driving vehicles being developed by conventional

car makers. With self-driving cars, there is a need to deliver sophisticated technology that can ensure that the vehicle will always handle its ever-changing surroundings well, even when driving in unfamiliar locations.

In the case of Navya's buses, however, once the fixed route has been mastered by an operator during a test run, the driverless bus will then remember the exact route. If an unexpected object does suddenly obstruct the route of the bus, the vehicle will pick up on this using its sensors, and an automatic brake will be applied.

With relatively low development costs, Navya plans to offer its self-driving bus service at a total cost of about €40 000 per year (approximately R583 772). The company is expecting global demand for tens of thousands of its self-driving buses.

In Japan, a company called DeNA is also making progress in the field of driverless vehicles. In August 2016, it tested out a driverless bus service in a park in Chiba. DeNA aims to introduce a driverless bus service at Kyushu University's Ito campus in Fukuoka during the first half of fiscal 2018.

## ELECTRIC ATMOSPHERE AT HARRODS

Electric vehicles are nothing new to Harrods, the legendary London department store, but now, more than 100 years after it first went the electric route, Harrods is once again returning to electric vehicle technology, with the addition of the 100-percent electric Nissan e-NV200 delivery van.

The British department store is the latest business to add a zero-emission Nissan e-NV200 to its fleet. More than 27 000 Nissan electric vehicles have already been sold to businesses across Europe.

The Nissan e-NV200 has been specially adapted to perfectly fit Harrods's delivery needs. The load space of the van has been fully refrigerated and shelving units added to allow for fresh groceries to be transported in optimum condition. The exterior has also been wrapped in the traditional green and gold Harrods livery to make it recognisable as it travels around the city.

In 1919, the store used solid-tyred American Walker electric vans, later building its own fleet of 60 electric vehicles to deliver goods to local London customers. As petrol engines became more popular, the electric vans were slowly phased out.

Now Nissan has enabled Harrods to have an all-electric van on its fleet once again – and Guy Cheston, media sales director at Harrods, is thrilled: "It's wonderful to see an electric Harrods van on the roads of London again. Electric technology has developed rapidly since our old fleet was in operation, and is now a far more sustainable transport solution.

"Nissan is the leader in electric vehicle technology and the e-NV200 was the obvious choice for us, allowing us to easily complete daily deliveries more sustainably and efficiently," he concludes.



## THE MAN TGE IS BORN!

We first reported on the MAN TGE in March 2016 after it was revealed at the IAA Commercial Vehicle show in Hannover, Germany. Now, just 13 months later, the first production vehicle has rolled off the assembly line at the newly constructed plant in Wrzesnia, Poland.

As the first light commercial vehicle (LCV) sold by MAN, the TGE represents the start of a new era for the brand. It was developed in response to the demand from many long-standing customers in the logistics, courier and parcel service, after-sales and trade sectors.

"Our recently established plant in Wrzesnia is setting new quality standards. The vehicles undergo a wide range of quality checks. The dimensional stability of the body shell is checked repeatedly during the assembly process by automated lasers and digital cameras on multiple geometric stations. I am, therefore, delighted to be supplying the MAN brand



with a model of such high added value as this first TGE", comments Jens Ocksen, CEO of Volkswagen Poznan.

Dennis Affeld, senior vice president van sales at MAN Truck & Bus, adds: "We are looking forward to combining the high-quality production standards of the TGE with MAN's professional sales and service network. We have no doubt our customers will love it. We plan to sell about 20 000 vehicles a year."

Vehicle VIN number ...01, though, is MAN's own, with Ocksen and Affeld taking delivery of it from the end of the assembly line. It's a silver van with a short wheelbase and high roof.

The high-roof MAN TGE is around six-metres long with a load capacity of 10,7 m<sup>3</sup>. The van – in weight rating variants up to 3,5 t – is powered by a 2,0-litre diesel engine that develops 103 kW (140 hp).



## ULTIMATE BOY'S TOY?

Sometimes the chaps Down Under can really come up with some clever ideas (as much as South Africans hate to admit to this). This is one such idea...

Toyota Australia has created a very special Hilux – it's a full-scale Tonka toy! The concept vehicle was created to mark the high-riding off-roader's breakthrough in becoming the country's best-selling vehicle in 2016 (yawn; this is something the vehicle has long achieved here in South Africa). Tonka, a household name, is celebrating its 70th anniversary this year, while Toyota is in its 80th year of incorporation.

The unveiling coincided with the release of Toyota GB's series of short films, which show Hilux going head-to-head with its tiny Tamiya radio-controlled model counterpart in a series of off-road and performance challenges.

The new concept was designed, assembled and tested by designers and engineers from Toyota Australia's 150-strong product planning and development division. Product design chief Nicolas Hogios says the extreme style and capability of the Hilux Tonka Concept will capture the imagination of kids and adults alike.

"We have taken Tonka out of the sand pit and reinvented the Hilux from top to bottom and from nose to tail," he says.

"Inspired by the Tonka trucks that kids play with in their backyards, it goes way beyond the already huge abilities of Hilux to traverse rocks and other rugged terrain," he adds.

"It is also dramatic evidence that our local team loves to have fun; we're keen to explore new ideas and we're always looking to push the boundaries of what's possible," he explains.

Underneath the dramatic black-and-yellow livery is a top-of-the-range Aus-spec production Hilux – an SR5 double cab with a powerful 2.8-litre turbodiesel engine. The extensive makeover starts with substantially higher ground clearance – an increase in ride height of 150 mm. Combined with a high-riding axle, heavy-duty suspension and 35-inch diameter tyres, the Hilux Tonka Concept is equipped to power over rugged terrain that would be off-limits to conventional off-roaders.

Want to order one? Sorry! You can't! The Hilux Tonka Concept won't be coming to a showroom near you any time soon...



## SUCCESS IN SAUDI FOR MERC! (THANKS TO A SOUTH AFRICAN)

The truck market in Saudi Arabia may be taking strain, but this hasn't stopped Mercedes-Benz from doing a cracker of a deal there: the company has just concluded a 540-truck deal!

We can reveal that a certain South African can take a pat on the back for securing this deal. On October 1 last year, Kobus van Zyl (previously head of Daimler Trucks and Buses in South Africa) packed his bag for Saudi, where he is now general manager for National Automotive Industries in Saudi Arabia, a joint venture between Mercedes-Benz Trucks and EA Juffali & Brothers.

"We are so thrilled with this deal. It's certainly one of the biggest deals ever in our market, and the incredible thing is that all the trucks were sold with service contracts," he tells **FOCUS**, in an exclusive interview.

The trucks – a mix of medium- and heavy-duty models – were purchased by Saudi transport group Al Khaldi from Damman. Following this deal, the Al Khaldi transport group has just over 1 000 Mercedes-Benz trucks in its fleet (1 045 to be precise).

Offering transport services for oil fields, construction sites and the chemical industry since 1972, the Al Khaldi Transport Group ordered the vehicles with a customised support package, including the aforementioned service and maintenance contracts,



comprehensive training for drivers and mechanical engineers and a 24-hour roadside assistance guarantee.

The Kingdom of Saudi Arabia is a core market in the Middle East North Africa region for Mercedes-Benz trucks, with more than 43 500 Mercedes-Benz trucks delivered to customers there since 2002.

Van Zyl attributes the deal to his many decades of working in South Africa. "To be honest, I am so grateful for what I learned in South Africa from our trucking customers and their incredible focus on life-cycle management.

"While this deal is mainly as a result of a fantastic relationship and partnership with the customer, this is definitely the first time that a large Saudi transporter has decided to partner with us to provide maximum truck availability for their customer. It was very good to tell them that I have seen this movie, and the huge benefits, before," he says.

We have only one thing to say: WELL DONE BOET!



## FAW SA RECOGNISED FOR MAJOR ACHIEVEMENTS

FAW Vehicle Manufacturers SA (FAW SA) has been recognised as the most determined and successful export and import business unit of the worldwide FAW Group, at the FAW Import and Export Corporation's annual Global Sales and Marketing Conference in Chengdu, China.

The local concern received the Best Distributor Award 2016, which, according to Wang Zhijian, president of the FAW Import and Export Corporation, honours FAW companies that have shown quantifiable results emanating from joint determination and focused drive.



"This award stands for the united spirit of FAW employees and dealer partners who jointly tackle regional and global challenges. It is awarded in recognition of singular collaboration between all teams and individuals working for the company or dealers in sales, aftermarket, service and support, parts and maintenance, as well as finance and insurance. It acknowledges teams that have worked according to a coordinated strategy with a single unified vision," Zhijian explains.

FAW SA has carried its momentum into 2017, having set new benchmarks and company sales records in both January and February this year. It sold 107 units in January – setting the highest benchmark yet for FAW SA, in terms of year-on-year growth comparisons – and 134 units in February; the most ever recorded in a single month.

FAW SA had one of the most consistent export drives in the South African truck-building industry during 2016. The company exceeded the 200-unit mark in exports into African countries in just a year.

Increasingly, African truck dealers, who traditionally placed their orders from FAW China, are moving their orders to originate out of South Africa; owing to the shorter lead time for delivery, the high levels of quality from the South African plant and the reduced cost of sourcing FAW vehicles on the same continent.

At the end of 2016, the South African plant, in Coega near Port Elizabeth, celebrated the 2 000th locally built truck to roll off the production line, after just two years of production.

Jianyu Hao, CEO of FAW SA, adds: "What is most gratifying is that many of our units being bought by sub-Saharan customers are now second-generation repurchases. This affirms our commitment for service and support into the African regions."

## LONDON TAXI COMPANY TO LAUNCH ELECTRIC VANS!

We all know those cute, but somewhat ugly, taxis that trawl around London... well, now the company behind these vehicles is moving into the business of producing vans. These won't be ordinary vans either; they will feature electric propulsion!

This is the first time that the Chinese-owned London Taxi Company is planning to produce a vehicle that isn't a taxi. This is not its first foray into electric vehicles (EVs) though; in March, it opened a plant to produce electric taxis.

According to Chris Gubbey, CEO of the London Taxi Company, the electric van will be targeted specifically at fleet operators in urban areas. "This is going to be the future-proofed 'white van' that people have been waiting for. Designed solely for the urban commercial sector and dedicated to the people who keep our cities working, it will be clean, competitive and ready for cities of the future," he says.

Gubbey maintains that the air-quality crisis in many urban environments has highlighted the scale of the opportunity and demand for zero-emissions capable commercial vehicles in major cities across the world.

Former General Motors Europe boss, Carl-Peter Forster, who is now chairman of the London Taxi Company, describes the van as "a transformative step for the company".

Parent company Geely is investing an additional £30 million (R516 million) in the company to facilitate the launch, taking its total investment to £325 million (R5,6 billion).

London Taxi Company has not confirmed a launch date for the electric vans.

# SAVING LIVES WITH TECHNOLOGY



Volvo Trucks has always led in vehicle safety, and now we're using advanced technology to save more lives. Our Active Safety systems use an understanding of the state of the vehicle to avoid collision, or to minimise the effects if one is unavoidable.

Adaptive Cruise Control, Collision Warning with Emergency Brake, Lane Keeping Support, Lane Changing Support, and Driver Alert Support are just some of the ways we're moving towards our goal of zero accidents involving a Volvo Truck.

**ACTIVE SAFETY**

Volvo Trucks. Driving Progress



## COMMERCIAL VEHICLE SALES REPORT FOR MARCH 2017

Note: For the time being, Great Wall Motors SA (GWM) and Mercedes-Benz SA (MBSA) will only report aggregated sales data. The GWMSA and MBSA commercial vehicle market split volumes are estimates based on historical trends and forecasting techniques. No GWM figures were disclosed for February. Associated Motor Holdings (AMH) and Amalgamated Automobile Distributors (AAD) is now Motus Corporation, and continues to disclose aggregated figures.

Light Commercial Vehicles < 3 501 kg	Total: 14 882
Fiat Group	40
Ford Motor Company	3 350
GMSA	2 029
Jaguar Land Rover	18
JMC	20
Mahindra	204
Mazda South Africa	35
Mitsubishi	48
Mercedes-Benz SA – estimate	18
Motus Corporation	520
Nissan	3 009
Peugeot/Citroen	12
Renault	2
Suzuki Auto	25
Tata	100
Toyota	4 999
Volkswagen SA	453
Medium Commercial Vehicles 3 501 – 8 500 kg	Total: 833
Fiat Group	2
Ford Motor Company	3
GMSA	194
Iveco	97
JMC	4
Mercedes-Benz SA – estimate	183
Motus Corporation	14
Tata	63
Toyota	194
Volkswagen SA	79
Heavy Commercial Vehicles 8 501 – 16 500 kg	Total: 552
FAW	56
GMSA	181
Iveco	8
MAN	19
Mercedes-Benz SA – estimate	51
Motus Corporation	1
Tata	38
Toyota	125
Volvo Group Southern Africa	73
Extra-Heavy Commercial Vehicles > 16 500 kg	Total: 1 144
Babcock DAF	42
FAW	13
GMSA	52
Iveco	55
MAN	85
Mercedes-Benz SA – estimate	324
Powerstar	50
Scania	189
Tata	24
Toyota	54
Volvo Group Southern Africa	256
Buses > 8 500 kg	Total: 89
Iveco	6
MAN	25
Mercedes-Benz SA – estimate	20
Scania	35
Tata	1
Volvo Group Southern Africa	2

\*Source: National Association of Automobile Manufacturers of South Africa (Naamsa).



## TRUCKS OF TOMORROW COULD GENERATE THEIR OWN WIND

With the future of motor vehicles becoming increasingly electric, even truck aerodynamics is heading in that direction... researchers at Sweden's KTH Royal Institute of Technology are developing a device that increases the fuel efficiency of trucks by cloaking them in electric wind!

*New Atlas* reports that the engineers have followed the lead of aerospace engineering, where winglets fitted to the tips of an aircraft's wings generate vortices that allow the air to flow more smoothly over the top of the wing and increase lift.

In a similar way, the KTH team has used plasma actuators to charge the air and generate vortices at the front of the truck cab. The new technology controls the flow of wind around the truck to reduce drag and could improve fuel consumption by five percent.

How does this work? As air strikes the front of the truck, it flows around it forming a boundary layer that, if the truck is sufficiently aerodynamic, follows the surface of the cab and cargo area until it reaches the back and breaks up.

This is ideal if the truck is moving through calm air. If wind strikes the vehicle at an angle, however, it can slow down the boundary layer, causing it to separate and form turbulence.

The plasma actuators developed by KTH are two high-voltage electrodes that ionise the surrounding air molecules, which accelerate them through the electric field to generate wind without the need for moving parts or protruding airfoils.

In addition, these actuators can be adjusted to counter the specific strength and direction of an incoming wind by setting up vortices that force the air into the boundary layer, thereby lowering drag.

"Our ultimate goal is to reduce the flow separation that occurs on the front corners of the truck," says KTH researcher Julie Vernet. "By adding momentum close to the surface, the size of the separated region is reduced."

## TESTING TIMES FOR UNIQUE ATEGO

Malmö is Sweden's third-largest city and, according to *Lonely Planet*, it's famous for its "progressive contemporary feel; Scandinavia's tallest building, beautiful parks, edgy contemporary museums and some superb cuisine". Well, now it has yet another claim to fame: it's also home to a unique Atego hybrid truck from Mercedes-Benz.

The truck is being tested by transport operator DSV Sweden, and it runs on both electricity and the new biofuel HVO 100. HVO stands for hydrotreated vegetable oil, which is an advanced renewable biomass in the form of 100-percent synthetic diesel. Contrary to what the name implies, a large part of the Swedish HVO 100 is produced using slaughterhouse (animal) waste in addition to vegetable oils. HVO 100 may reduce CO<sub>2</sub> emissions by up to 90 percent. Other emissions (CO/HC/NOx and particulates) are 20 to 60 percent lower compared to regular diesel.

After a six-month test period in Malmö city traffic, the project will be evaluated. The results will help determine if electric hybrids can become long-term solutions to distribution in metropolitan areas,

which are especially vulnerable to air pollution.

"The Mercedes Atego hybrid is our latest investment in environmentally certified vehicles as part of our long-term efforts to reduce



environmental impact. We definitely see the benefits of having a new type of distribution vehicle in urban traffic, as the combination of HVO and electricity produces significantly lower emissions levels of carbon dioxide. It will be interesting to assess a hybrid distribution vehicle in the urban environment and the environmental benefits it provides," says Staffan Klinterhäll, business area manager at DSV Sweden.

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# Is MyCiTi UNSUSTAINABLE?

In the third instalment of our four-part series on public transport in Cape Town, MARISKA MORRIS investigates the MyCiTi bus rapid transit (BRT) system's R52-million deficit and what plans have been proposed to turn this around

**T**here is no dispute about the popularity of the MyCiTi bus rapid transit (BRT) service. In November 2016 alone, there were 1.76-million passenger journeys, according to the Transport and Urban Development Authority (TDA). More significantly, the bus service has attracted non-traditional commuters; including middle-class passengers who own their own vehicles.

Much of the success of the MyCiTi system is due to its reliability. Since June 2016, the TDA has reported a 90-percent "on time" status for its buses. The term, according to the international norm, is defined as referring to "buses that are between two minutes early and five minutes late", the TDA notes.

The popularity of the MyCiTi service will, however, not protect it against the R52-million deficit it faces for the 2016/17 financial year. The City spent approximately R278 million on subsidising the service in 2016. Brett Herron, Cape Town mayoral committee member for transport, argues that the city should not be criticised for the large subsidy, as these subsidies are the norm across the globe.

The city has little choice other than to subsidise the MyCiTi system, as commuter fares cover only about 40 percent of costs, explains Roger Behrens, director of the Centre for Transport Studies (CFTS) at the University of Cape Town.

"The TDA has realised that it cannot afford to maintain that level of subsidy if the bus service is rolled out across the city," he notes. When the city was asked why the MyCiTi transport subsidies are so high, it referred to the inefficient spacial planning structure inherited from the apartheid era, but this is only part of the problem.

## WHY THE SYSTEM IS SO EXPENSIVE

The blueprint for the MyCiTi BRT system (as well as its sister programme Rea Vaya, located in Johannesburg), is based on a Latin American transport system, which has reported up to 45 000 passengers per hour on one corridor.

"That's not far off what the entire Rea Vaya system is doing in a day," Behrens says. Latin American passenger numbers are much higher as a result of spatial planning. These cities are densely populated, with passengers travelling short distances. This means there are more passengers sitting on the same seat – a process referred to as "seat renewal".

With seat renewal, one seat generates multiple fares along the bus route. This has led to some cities, such as Bogotá (in Colombia), reporting a subsidy-free transport service. Policy makers were hoping for a similar outcome in South Africa when implementing the BRT systems. Behrens believes that they were too optimistic.

The MyCiTi service doesn't have the same level of seat renewal as the services in Latin America, because passengers need to travel long distances to get to their places of work. There is a lack of development along public transport routes, which makes the city less dense.

Another challenge for the MyCiTi system is that it is very expensive to build and maintain.

The buses have expensive, complex electronics and there is an entire office dedicated to running the sophisticated fare collection system. The stations and kiosks need to be maintained as do enclosed, air-conditioned rooms with turnstiles, remote-controlled doors and bullet-proofing.

Drivers work seven to nine-hour shifts. There are



multiple drivers, and benefits, which include pension, medical aid and sick leave. "To run a system that is so infrastructure heavy is expensive," says Herrie Schalekamp, research officer at CfTS.

The TDA echoes the specialists' concerns over the current subsidy, which, it argues, will not be sufficient to cover increasing operating costs. Plans to extend the service to other areas will need to be cancelled because of these high costs. The authority is, however, looking at "creative ways of cutting the cost of travel" in the hope of reducing the subsidy.

### THE PLAN TO SAVE MONEY

The first plan is to increase fares, which will bring in an extra R20 million. This will undoubtedly be an unpopular decision, as some commuters already find the fares expensive. The city is also planning to implement transit-oriented land development.

This focuses on building houses, offices and retail space in close proximity to quality public transport, thus creating a "walkable neighbourhood". In theory,

no other formal public transport in those areas and residents relied solely on minibus taxis.

As the MyCiTi expanded its reach, the city slowly phased out the taxi industry. Taxi owners were compensated, drivers were employed (after receiving training) as bus drivers and no new taxi operating licences were issued.

By August 2015, the city announced the withdrawal of the remaining taxis in Atlantis, Table View and Dunoon. A total of 149 minibus taxis operating in Atlantis were removed and another 229 taxis were removed in Table View and Dunoon. It wasn't long afterwards that the city realised that complete phasing out of the minibus-taxi industry was unrealistic.

The TDA says: "Minibus-taxis will always be part of the public transport offering. The Authority is now looking at ways of integrating the taxi and bus industries."

### WHAT THE HYBRID TRANSPORT SYSTEM WILL LOOK LIKE

The hybrid transport system will essentially integrate the formal MyCiTi services with informal minibus-taxi services in a way that they complement each other to provide an affordable, reliable service for commuters. Formal, scheduled bus services, for example, will be used in high-volume corridors with large numbers of passengers.

Minibuses will run on routes with fewer passengers. Both services will run in the dedicated red bus lanes to increase efficiency. A limited number of minibuses will also run in the areas where the MyCiTi fails to meet peak demand.

The minibuses will not be allowed to run during off-peak periods, with the hope that this will encourage minibus-taxi passengers to move to the bus service.

Negotiations are currently underway to see whether this hybrid transport system is feasible. The TDA estimates that there will be a 50- to 70-percent drop in government funding if this plan is implemented.

"There is now a grant system to help municipalities fund investment in public transport. Recently the wording has changed, which forces municipalities to demonstrate the financial sustainability of proposed projects," says Schalekamp. It is hoped that this will prevent future public transport projects from relying on unsustainable subsidies.

Despite all these challenges, the bus service is undoubtedly innovative; for example, it provides free WiFi. There is also talk of using electric buses to reduce carbon emissions. BYD SA Company was awarded a tender in October 2016 to provide ten electric buses and charging stations.

More importantly, the MyCiTi system has changed the public's view on public transport. "People are now talking about public transport. You see ads for accommodation mention 'we are close to the MyCiTi bus route,'" Schalekamp mentions.

Promoting public transport is essential to reduce congestion in Cape Town. The city still believes the MyCiTi system can be the backbone of transport in the Western Cape. Perhaps this will happen, but it first needs to become more financially viable. **F**



this will create a more densely populated city, which should bring about shorter trips and seat renewal. The integrated public transport network plan has been approved and will be implemented over the next 20 years.

However, the financial benefits of this long-term solution might not solve MyCiTi's financial situation soon enough. Behrens suggests a more practical, short-term solution with a hybrid-transport system that merges the informal minibus-taxi industry with the MyCiTi system to reduce costs – something the TDA did not envisage initially.

Behrens explains that during the planning phases in 2007, policy makers predicted that once the bus service was up and running, there would be no market left for the minibus-taxi industry, as MyCiTi would form the backbone of all public transport in Cape Town.

The MyCiTi system was implemented in 2010 and was soon expanded along the West Coast. Areas such as Dunoon and Atlantis were a priority, since there was



# OF TWEETS, TRANSPORT AND TEACHERS

I need to thank Helen Zille for stirring up a beerhall brawl with her tweet about colonialism

**N**early four years ago, the first column in this series was devoted to the insipid role of the academic world in helping to sort out public transport problems. Not much has changed since then. As recently as March, Hopping Off questioned the inane comments from a local think tank which suggested that people should be given transport vouchers to use on any service of their choice.

I therefore owe a big thank you to Zille for her tweet, and the colonial benefits she listed therein: such as piped water, an independent judiciary and transport infrastructure. I'm glad she mentioned transport because I need an excuse to continue writing about the way we continually mismanage it.

Another vote of thanks goes to the queue of people who stood in line to take pot-shots at her. One of them was Professor David Everatt, head of the Department of Governance at the University of the Witwatersrand (Wits). In *The Star* of March 30, he writes:

*The country's transport infrastructure was a great colonial inheritance – it ensured that white South Africans had buses and trains and tarred roads and traffic lights – and black South Africans had none.*

Spot on there, Prof. This was exactly the point I made in February in my reply to Andrew Marsay.

*Entrepreneurial black South Africans created the minibus-taxi industry because blacks (wanted to go) anywhere – while the authorities felt they only needed to go to work, and then back home.*

Correct again, although South Africa urgently needs to sort out the unintended consequences of a deregulated industry.

However, instead of leaving it there and quitting

while ahead, Prof Everatt then had a "Zille moment" of his own:

*South Africa's post-colonial transport infrastructure created linkages between spatially and racially separated communities, introduced sustainable mass transit systems, the Gautrain, and the rest.*

This column has regularly criticised the academic world, and especially civil engineers and accountants, for their less-than-stellar contribution to fixing public transport. Must we now add sociologists to the list?

The truth is that, since coming to power, the ANC government has done very little to fix public transport. As for the Gautrain, this column has become boringly repetitive – it is one of the most bizarre and unsustainable public transport projects on Earth. As for "the rest", I assume that includes bus rapid transit (BRT), which has had mixed results.

In Cape Town it has, admittedly, taken several hundred cars off the road, but, in Johannesburg, it has merely resulted in a switch from minibus-taxis to buses. Hardly any motorists have moved over to public transport in Johannesburg. If "the rest" includes the Passenger Rail Association of South Africa (Prasa), we'll need to write a separate column.

Back in 1999, Fred Wentzel, a student studying towards a Master's degree at Rand Afrikaans University (now University of Johannesburg), wrote a thesis entitled: *Proposals for the coordination of formal public transport in the Johannesburg area*. It was based on a bus-by-bus analysis of the Soweto operations of Putco, a company that provides services under contract to the provincial government, which, incidentally, budgeted for a loss of R2,812 billion against the Gautrain in 2016/17.

At the time Wentzel did his research, the most

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recent government publication was the *Moving South Africa* report of 1998, which correctly identified "past land-use patterns" and "sub-optimal spatial planning" as two of the four strategic challenges to be addressed. Wentzel's study therefore proposed new routes and schedules that would significantly improve the linkages between Soweto and its neighbouring areas in terms of spatial coverage, frequency of service and hours of operation.

A by-product of the recommendations was that the proposed routes would reach destinations as far away as Midrand and even Pretoria, passing through many "white" areas on the way. This would mean that higher-income groups could be encouraged to use bus transport rather than private cars.

Two years later, in 2001, Wentzel's study became the core of a Centre for Scientific and Industrial Research (CSIR) report to the provincial government. To this day the report has been ignored, while billions

have been spent on schemes like the Gautrain and BRT, despite the fact that an improved basic bus network could be introduced at a much lower cost.

Sixteen years later, South Africa is now well and truly in junk territory, but that hasn't stopped the ANC-run provincial government from announcing expansion plans for the Gautrain, relying on the usual spurious claims of job creation, higher property values and black empowerment.

Last month's Hopping Off described the wretched travelling conditions experienced by workers trying to reach Sandton (the richest square mile in Africa, remember) from places like Soweto.

Here's a research topic for the Wits Department of Governance: Take a ride on Putco trip g116, the 05:45 from Soweto to Sandton, and ask the passengers whether they are being empowered.

Wentzel's thesis could be a useful source of reference material **F**.



Vaughan Mostert lectured on public transport issues at the University of Johannesburg for nearly thirty years. Through Hopping Off, Mostert leaves readers with some parting food for thought as he continues his push for change in the local public transport industry.

BUS STOPS

## TATA DELIVERS FOR IVORY COAST

Following an order for 500 next-generation, low-floor urban city buses from the Ivory Coast, Tata Motors has handed over the first 117 buses to Sotra (Abidjan Transport Company) in the country's economic capital, Abidjan.

Built on the next-generation Tata Motors heavy commercial vehicle (HCV) bus platform, the Tata LPO 1924 RESLF bus has been developed with inputs from Sotra. It features a high degree of customisation based on feedback gathered through city trails over the last couple of months.

Wide inswing doors at the front and outswing doors at the rear, six-bellow air-suspension, a wider gangway and comfortable seating are new features being introduced to Sotra's bus service. A pneumatic driver's seat; automatic transmission; lower noise, vibration and harshness levels; as well as tilt and telescopic integral power steering are built in to improve driver comfort.

The Tata LPO 1924 RESLF is said to be changing urban transport in Africa and the Middle East. It features aggregates from Cummins, Allison and Meritor and is built by Tata Motors with a Tata Marcopolo body.

Rudrarup Maitra, head of international business – commercial vehicles at Tata Motors, says: "Tata Motors is extremely proud to have received this order from Sotra and has worked very closely with



the company to give Abidjan a truly world-class solution, through a tried and tested partnership, to bring about change in the transport system in the Ivory Coast.

"With a dedicated team of engineers from Tata Motors, who have worked with Sotra over the last 12 months, we have probably achieved one of the highest levels of customisation in public transport in the region to deliver more passenger comfort, safety and efficiency to Abidjan's bus service."

Maitra adds: "What we have achieved, together with Sotra, is a perfect example of a public-private partnership, and we hope to partner other state transport units in the region to improve their respective bus services."



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