

ISSUE 19 Q3, 2019
RM8.00

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ISSN 2289-8921



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KDN PP18692/03/2015 (034159)



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There is So Much More

even a first in the market, there are many times significant changes and we hope that we can be the venue for the market to communicate about this. Normally, we talk about the manufacturers introducing something new. However, I would also be very happy to hear feedback from the market. Remember, I am only driving a desk and do not have the opportunity to really put buses and their surrounding tools to the test in real life. One example of such product is the Rosa that we are featuring in our Launches section.

Continuation

When I write, I try to think about continuations of stories. For instance, the first time I am writing about a company or product, I am looking at it from afar and the picture I paint is with broad strokes. Obviously, before I go into the details, I would need to introduce the company, the people and the general idea of what they are doing. My thought is then on how I can go back and write more about the same company, but in finer detail. It is a bit like a movie franchise. In the first movie you need to introduce the characters and later you can finely hone the characters without having to elaborate on their behaviour. I will have to agree that this requires you to follow every issue of Asian Buses (and that is why you can get the PDFs of all our magazines free online).

Contribution

As with any other magazine, Asian Buses also offers contributors to submit their articles. Personally, I like them a lot as they are almost guaranteed to be written in a different style, and about a subject that we are not experts in. If you have something interesting to communicate to the market I would very much like to hear from you. As I enjoy learning about new subjects, I am eager to get my hands-on material from others.

Drive safe and hope to hear from you

Stefan Pertz
Editor, Asian Buses

With magazines, there is really no stopping. What I enjoy is that there is no idle time. Once a magazine has been completed, the task is to put together the next one. Sometimes, that can be a challenge. For instance, during the break in December, many companies are slowing down and there isn't much to report about. However, we are still to produce a magazine that has a good chunk of content in it. For that, I need to be always on the lookout for new ideas, contacts and interesting products. I think this issue of our Asian Buses Magazine presents you with quite a number of new ideas.

Finding New Material

Fortunately, there are a lot of companies that I have never met or heard about. Going to events and researching on the internet almost always results in an aha moment as I stumble across something that I did not know and that can be used in Asian Buses. This time, for example, we feature a number of products that we have not talked about previously. Also, we are reporting about companies that we have not introduced in the magazine previously. You may turn to our feature story for insights into how Sync R&D went about developing the Elektrik Bas Inovasi Malaysia. I encourage you to introduce to us your suppliers and clients as we are always on the lookout for new story ideas.

Same but New

One of the constant sources for stories comes from companies that upgrade their products and services. While the actual product might not be extremely innovative or



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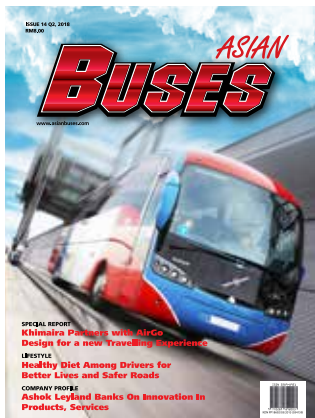
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Photo courtesy of Volvo Buses Singapore

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PUBLISHED BY

Asian Trucker Media Sdn. Bhd. No. 27-1, Block C, Zenith Corporate Park,
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ARTICLES

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PRINTED IN MALAYSIA

Times Offset (M) Sdn Bhd Banguan Times Publishing,
Lot 46, Subang Hi-Tech Industrial Park Batu Tiga 40000 Shah Alam,
Selangor Darul Ehsan Malaysia

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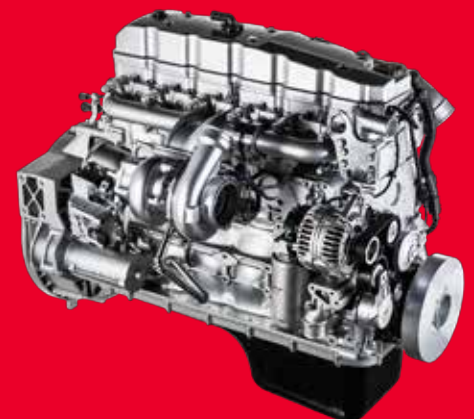


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Shell’s End-to-End Solutions for Transport Industry

Shell Malaysia showcased its complete end-to-end fleet solutions for the transport industry at the recent 2019 Malaysia Commercial Vehicle Expo (MCVE).

The solutions making up the Shell Rimula range of premium low viscosity synthetic lubricants, Shell FuelSave Diesel with Dynaflex Technology and Shell Card will benefit fleet operators by helping them achieve optimum efficiency, productivity and reduce total cost of ownership.

Equipped with the most advanced API CK-4 specifications, Shell Rimula’s premium lubricants are designed to not only achieve greater fuel economy and longer oil drain intervals but are also able to withstand extreme temperatures and loads in tough operating environments, while having a positive impact on lowering emissions.

Shell Lubricants Marketing General Manager May Tan said that customers in Malaysia can be rest assured that Shell Rimula lubricants are globally compatible with biofuels, including B10 bio diesel in Malaysia.

“As a technology leader, Shell has been evaluating bio diesel’s impacts and developing lubricants to meet

challenges such as increased oxidation, creation of deposits, changes in oil viscosity and engine component corrosion. Shell Rimula was tested in stringent oxidation, bearing and engine tests and performed above requirements which enhances the value of our end-to-end solutions for the transport and logistics industry,” she said.

In the coming months, Malaysia is set to be the first market in ASEAN to launch the all-new Shell Rimula Ultra, one of the most advanced fully synthetic heavy-duty diesel engine oils in the world. The new flagship product complies with the latest European ACEA E6 and ACEA E9 specifications and manufacturers’ approvals for use in ultra-modern diesel engines that comply with Euro 4 to Euro 6 emission standards. It offers longer oil life and extended oil-drain intervals of up to 150 000 km, better engine wear protection under all terrains and weather conditions as well as better fuel economy.

Benefits from the use of Shell Rimula are amplified when used together with Shell FuelSave Diesel. This high-quality diesel from Shell features Dynaflex Technology and can help keep a vehicle’s engine clean and protected for efficient running. With fuel expenses being one of the largest operating expenditures in running a fleet of vehicles, the annual savings from cleaner and more efficient engines can be significant.

The final part of the end-to-end solutions is managing fuel needs and its operating costs with Shell Card. Equipped with more than 50 years of experience and expertise, it provides a simpler, more secure and convenient way for fleet owners to purchase high quality fuels and keep their trucks running by enabling access to more than 900 Shell retail stations nationwide. Shell Card is able to manage fuel expenses efficiently and effectively for companies with a single online invoice coupled with data insights needed for more customised solutions.

Shell was the official fuel and lubricant partner for the 2019 MCVE. 

Leisure Frontier Group Acquires Two New Scania Coaches,

Leisure Frontier Group plans to target premium chartering market in Singapore.

With an eye to providing better quality service to its customers Leisure Frontier, through its new subsidiary Frontier Tours Pte Ltd, took possession of two K-series coaches from Scania Singapore.

Premium Chartering

With its first-ever acquisition of Scania vehicles to its fleet of more than 50 buses of different sizes, the Leisure Frontier group plans to target the premium chartering market in Singapore. "Working closely together, we understood that Leisure Frontier wanted to elevate its business with a higher-end offering," said Anders Liss, Country Manager of Scania Singapore. "Today, we have delivered a sustainable transport solution to provide the group with the best profitability as it pursues new market opportunities."

Each of the two Scania K410 IB 4x2 (Euro 6) features a high-torque engine and the Scania Opticruise gearbox for optimised gear changes, lower fuel consumption and greater comfort, while reducing clutch and synchromesh wear. To ensure high level of safety, the coach is equipped with the Electronic Braking System, Scania Retarder, Hill Hold and Traction Control.

New Direction

"It's a switch in our business direction towards using Scania coaches, to offer a more refined coach ride for




our customers," said Terence Ng, Managing Director of Leisure Frontier. "With full air suspension, the ride is more comfortable and less noisy for the premium customers we are targeting, such as large corporations. We plan to target direct charter services from Singapore to Malaysia for corporate companies." The company will run routes between Johor Bahru, Malacca, Kuala Lumpur and Desaru.

Mr Ng added: "The Scania Euro 6 engines also support our goal of emphasising a greener, more environmentally friendly form of transportation with greater fuel economy and lower emissions that comply with strict European standards. This order is also about renewing our fleet and making it as environmentally friendly as possible while providing our clients with the most comfortable coach that is on the market today."

Repair & Maintenance

To ensure the vehicles enjoy the best uptime and performance at a predictable operating cost, the Leisure Frontier group has also signed up for Scania's repair and maintenance contracts.

"In our research, we find that Scania provides a very exclusive service and detailed after-sales approach to maximise vehicle uptime," said Mr Ng. "Our coaches are more reliable, fuel-efficient and safer when they are properly maintained by professionals, using genuine parts from Scania." The Leisure Frontier group plans to make the two new Scania K-series coaches available for customers to charter from September 2019. 



MAN to Show Innovations at Busworld

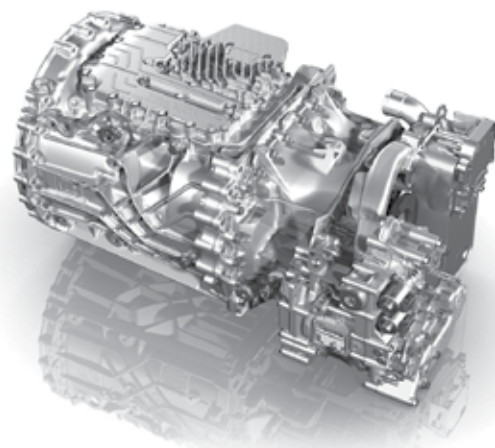
Gearing up to showcase innovative products to address the current changing needs of the market is German brand MAN, which will present numerous premiers at this year's Busworld.

Busworld started in 1971 and was held every two years in Kortrijk (Belgium) until 2017. From 2019 onwards, Busworld will be held in Brussels, the capital of Europe. In 2019, Busworld celebrates its 25th edition. With almost 50 years of experience, it is the oldest and most famous bus and coach exhibition. In 2001, Busworld International went worldwide and it now has six sister exhibitions covering different regions. MAN is taking this opportunity to showcase their latest and most advanced buses. There will be eight vehicles in the indoor booth and seven more outside with three engine displays rounding off the displays.

The company's premières include the Lion's City 19, the Lion's Intercity with a D15 engine, and the eTGE Combi and TGE City minibuses. Offered to the public for test-driving for the first time is the all-electric MAN Lion's City E. These days, mobility has to be social, future-looking, ecological and economical. Buses play an important part in helping everyone to tackle the challenges relating to emissions, traffic volume and affordable mobility – whether in city, intercity or long-haul transportation. The vehicles of today also have to be able to meet the mobility requirements of tomorrow.

MAN Lion's City: ready for the future of urban transport

The answer to the current questions around urban mobility is the MAN Lion's City. With its new generation of city buses, MAN can offer efficient and environmentally friendly solutions for urban transport – tailored to the individual needs of every customer and to meet market requirements. At the trade fair in Brussels, MAN will be exhibiting a 12-metre solo version of its all-electric Lion's City E, which comes with 35 seats. The e-bus completes this new generation of city buses – also available with diesel, natural gas and hybrid propulsion – with its emissions-free drive. Its inimitable design elements highlight the unique quality of the electric drive, which visitors to Busworld can



now experience for the first time live in the outside area. The most obvious differences are the absence of the engine tower, the position of the batteries on the roof and the 4 additional seating places that this creates in the rear. In the solo bus, the all-electric driveline can produce an output of between 160 kW and a maximum of 270 kW. As a result, the Lion's City E can be relied upon to provide a range of 200 km, or up to 270 km in good conditions, across the entire service life of the batteries.



you have the option of adding a wheelchair lift in the rear. All of the seats have three-point seatbelts and electric seat heating – a very effective and efficient source of heat, given the direct contact with the seat.

To save space, the batteries of the fully electric-driven MAN eTGE Combi minibus are located underneath the slightly raised floor. In theory, they should last for a range of up to 173 kilometres according to NEDC, and 114 kilometres according to WLTP. The vehicle is charged using a 7.2-kilowatt AC wallbox, which takes around five-and-a-half hours. The bus can also be charged more quickly – from zero to 80 percent within 45 minutes – if you have access to a DC charging station with a Combined Charging System (CCS) and 40 kilowatts of charging power.

A permanently activated synchronous motor is used for the drive system in the MAN eTGE. The three-phase motor is mounted right at the front on the drive axle in combination with the single-speed gearbox. This provides a maximum of 100 kilowatts of power, delivering around 50 kilowatts in continuous operation. The vehicle's immediately available 290 Nm of torque ensures agile handling. In addition to a locally emission-free drive, the new MAN eTGE Combi boasts a whole host of on-board safety technology: parking assistance systems including side protection, multi-function camera, rear-view camera, cruise control system, maximum speed limitation, a surroundings monitoring system with city emergency braking function, and Emergency Brake Assist (EBA) advanced emergency braking system. ■

To be exhibited by MAN for the very first time is the Lion's City 19 EfficientHybrid – the new conventional brother within the family of city buses. The bus spans 18.75 metres in length and sees MAN growing its new generation of scheduled-service buses with an appealingly cost-efficient solution for inner-city transportation. In the three-axle trade fair display vehicle, there is space to seat 38 passengers – four more than in a Lions City 18 with a similar configuration. A highly efficient D1556 LOH diesel engine with 360 hp (265 kW) powers the vehicle and, like all internal combustion engines presented by MAN, meets the Euro 6d emissions standard that will take effect from 1 September 2019. If equipped with MAN EfficientHybrid, the bus becomes an even more economical and environmentally friendly solution. The stop-start function ensures that the vehicle is also near silent and emissions-free when it stops.

MAN Truck & Bus expands minibus range

In addition to the MAN TGE Intercity for overland transport, which was debuted at the IAA 2018, MAN Truck & Bus will be showcasing two new minibus models at Busworld 2019 in Brussels: the fully electric MAN eTGE Combi and the MAN TGE City. Whereas the MAN TGE 4x4 Intercity is suitable for shuttle services, excursions, transporting hotel guests and even as a multi-purpose vehicle, the new electrically powered MAN eTGE Combi and new MAN TGE City have been designed for inner-city passenger transportation in particular. All three fully-fledged minibuses were created by modifying the design of the TGE van.

World premiére: all-electric MAN eTGE Combi minibus

The MAN eTGE Combi is MAN Truck & Bus's first fully electric-driven minibus in its range of buses. Its is based on the series-produced MAN eTGE electric van and, as an M1-class vehicle, has been (purposefully) designed to carry up to eight passengers. Hence, this new minibus is particularly suited for inner-city transportation in low-emissions zones and in residential and health resort/health care areas where there is a focus on keeping noise to a minimum. The standard version of the MAN eTGE has eight passenger seats. As the seats are fixed using airline-style rails, the seating layout is extremely flexible and



Shell Malaysia Launches All-New Shell Rimula Ultra 5W30

New flagship fully-synthetic heavy-duty diesel engine oil is Shell's most advanced.

Shell Malaysia has officially launched the all-new Shell Rimula Ultra 5W 30, its most advanced fully synthetic heavy-duty diesel engine oil yet.

Competitively priced, the all-new Shell Rimula Ultra 5W 30 offers longer oil life and extended oil-drain intervals of up to 150 000 km, better engine wear protection under all terrains and weather conditions, as well as better fuel economy.

The all-new Shell Rimula Ultra 5W 30 complies with the latest API CK-4, European ACEA E6 and ACEA E9 specifications; and manufacturers' approvals for use in ultra-modern diesel engines that meet with Euro 4 to Euro 6 emission standards.

Shell Lubricants General Manager – Malaysia & Singapore, Baljit Singh said that the introduction of the all-new Shell Rimula Ultra further strengthens the Shell Rimula portfolio of premium low viscosity synthetic lubricants available in Malaysia that includes the Shell Rimula R6 LM and R5 LE.

"As the largest lubricants supplier in the world for the past 12 consecutive years, we at Shell understand the needs of our customers. We are a partner you can trust to deliver the most advanced and proven lubricant solutions that are backed by unmatched technical support," he said.

Speaking at the launch which took place at the 2019 Shell Rimula Night at Hotel Imperial in Kuching, Shell Lubricants Marketing Manager – Malaysia & Singapore, May Tan said;

"There is a global shift towards low viscosity synthetic lubricants due to proven benefits such as improved oil and engine performance; longer oil-drain intervals and fuel economy that add up to lower total cost of ownership. This is critical for fleet operators, especially in today's

challenging economic environment. We see Malaysia as the right market for it and we are the first market in ASEAN to launch the new flagship product today."

"The all-new Shell Rimula Ultra is a result of Shell's technology leadership in lubricants, which is driven by world class research and development and extensive technical collaborations with leading OEMs, universities and industry bodies," she further added.

Another highlight at the 2019 Shell Rimula Night was the official announcement of the 13 winners of this year's Ultimate Stopover promotion.

The winners will be taken on an exclusive 5-day 4-night all-expense paid trip to Barcelona in September to experience the vibrant Spanish city renowned for its arts, culture, football and cuisine. They will also have an opportunity to gain a deep insight into the innovation-driven world of Shell Lubricants.

The much-anticipated annual promotion brings to life Shell Rimula's promise of being the "engine oil that works as hard as you", rewarding loyal customers with the ultimate stopover experience around the world.

This year's promotion was held from 1 March to 30 June and was opened to customers who purchased any Shell Rimula heavy duty and light duty diesel engine oil products. ■

Rapid KL Midi Buses Trial Services For Route T300 and Route T304

The Route T300 operates from Bukit Indah Hub to Ampang point, via Jalan Rasmi and the trial service which used three midi buses, started from 1st of September to 29th November 2019.

T300 has 14 stops heading towards Ampang Point and 17 stops returning to Bukit Indah Hub. The stops are Flat Taman Kosas, SM Kosas, Dewan, SEK Ugama Pasti Ilmi, Rumah No 15, Tmn Kanak Kanak, Tudor Court, SPG Anggerik, Rumah Minangkabau, Rest Tawakal, Klinik Suria, 7 Eleven (Opp) and Ampang Point (Opp), Ampang Point, 7 Eleven, Rumah Rais Yatim, Tadika Nur Laila, Rumah No 11a, SPG Bkt Indah 1/11, Emerald Hill, SPG Bukit Indah 3/11 and Tadika Hunny.

According to its chief executive officer Muhammad Yazurin Sallij, the trial will test the suitability of running the midi buses in neighbourhoods with narrow roads and it will benefit the commuters with better journey experience.

"We believe with shorter buses, we can increase the frequency and serve our passengers better as it will have a faster turnaround time," said Muhammad Yazurin in a statement.

The midi buses are the shorter eight-meter fully air-conditioned 27-seater buses that can carry about 31 passengers per bus. It ran on a frequency of 15 minutes during peak hours and 25 minutes during non-peak hours, from 5:30am to 11:40pm.

On the first day of its trial service, the midi busses had an average of 10 passengers per trip when it started at 5:30am. The numbers went up at noon with an average of 21 passengers per trip. For those six hours of service, the three midi busses managed to commute about 200 passengers.



Rapid Bus Sdn Bhd, the operator of the Rapid KL Bus services, has launched two trial services on its midi buses for Route T300 and Route T304 in September.

"If there is an encouraging demand during the trial, we will consider retaining the service for this route and possibly extend similar service to other potential routes. This is part of our continuous effort to provide efficient public transport services to the people," said Muhammad Yazurin.

Before this, Route T300 uses two 12-meter buses for the 11km route. It commutes an average of 800 passengers a day with a total of 24 000 passengers a month.

Meanwhile, the Route T304 that operates like Route T300 but it covers 10 stops while heading to Ampang Point and 16 stops returning to the Hub. The stops includes Flat Tmn Kosas, Sk Taman Kosas, Jalan Seven Eleven, Car Wash, Shell, AJ426 SJKT Ampang, LRT Ampang, AJ325 Flat Taman Dato Ahmad Razali, AJ108 Ampang Point (Opp) AJ 182 Ampang Point, Desa 288, Taman Ahmad Razali, AJ 31 LRT Ampang (Opp), Dewan Ahmad Razali, AJ61 Ampang Waterfront (Barat), AJ435 Ampang Waterfront (Timur), PDG SM Kosas, SM Kosas, Rumah No11a, SPG Bukit Indah 3/11 and Tadika Hunny.

The trial started on the 15th of September and will last for three months. The Route T304 trial run used five midi buses which include one disabled friendly unit that is covered with the large blue sticker, specially introduced for the disabled community. The five buses travelled on a frequency of 14 minutes during peak hours and 30 minutes for non-peak hours.

"We hope to gather as much data and feedback as possible to assist Rapid KL in making decisions on the possibility of using the midi bus for certain routes, especially for Route T304, which we felt is appropriate," said Muhammad Yazurin.



HAB BUKIT INDAH	
HAB BUKIT INDAH	HAB BUKIT INDAH
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SM KOSAS	SPG BKT INDAH 3/11
DEWAN	EMERALD HILL
SEK UGAMA PASTI ILMI	SPG BKT INDAH 1/11
RUMAH NO 15	RUMAH NO11A
TMN KANAK KANAK	TADIKA NUR LAILA
TUDOR COURT	SEK UGAMA PASTI ILMI
SPG ANGERIK	RUMAH NO 15
RUMAH MINANGKABAU	TAMAN KANAK-KANAK
REST TAWAKAL	TUDOR COURT
KLINIK SURIA	RUMAH TERES
7 ELEVEN (OPP)	RUMAH RAIS YATIM
AJ 108 AMPANG POINT (OPP)	REST TAWAKAL
	KLINIK SURIA
	7 ELEVEN
	AMPANG POINT

Like all Rapid KL buses, the midi buses used the cashless system that accepts only Touch N'Go travel cards and the My50, and My100 subscription packages.

"This midi bus trial project is to enhance the connectivity for the 'first mile, last mile'. With this connectivity, Rapid KL hopes that more people will use public transport, especially the bus service," Muhammad Yazurin said. ■



Penang Hop-On Hop-Off Adds Service

Penang Hop-On Hop-Off was introduced to the public on 15 November 2013. The fleet started with ten Scania buses. Now the company provides city tour services on Fridays to Sundays, public and school holidays only. On other days, the company runs a sightseeing tour to cater to tourists.

Fazrudi said that the company now only runs a fleet of four buses. He added that "tourism in Penang Island is centred around the city centre. Many tourists prefer to walk to nearby tourist attractions which led to a low ridership. This number is in stark contrast to our city tour in Kuala Lumpur. So we decided to decrease the number of buses on the city tour route and expanded the variety of services such as a sunset tour, Penang Hill shuttle service and a panoramic tour."

As for the city tour, the company used to provide 16 stops on the route. The number of stops has now been reduced to 11 with stops along Gurney Drive, Fort Cornwallis, Chulia Street and Komtar amongst others. This is due to the removal of stops along Batu Ferringhi. Fazrudi mentioned that the roads along Batu Ferringhi are too narrow and the traffic can get congested during peak seasons. "There was once where a bus was stuck there for two hours. It can get frustrating for the passengers as well when the branches along the route hit them or obstruct their view. After much deliberation, we decided to halt the Batu Ferringhi stops and concentrate our service in the city. It is also easier to predict the traffic and maintain intervals between buses at 30 minutes."

Maintenance of the buses is done in-house. Every night, the bus captain checks the condition of the bus before handing it over to the technician. The technician then does a thorough check on the bus to ensure it is fit for use the next day. The company stocks some spare parts to ensure repairs can be done rapidly. There are plans to bring an additional bus from Kuala Lumpur in order to resume service as soon as possible in the event of a breakdown.

Since the sunset tour, sightseeing tour and panoramic tour have recently been added, Fazrudi shared that they will have to closely monitor its viability in the long run. The recent school holidays saw a hike in number of passengers whilst off-season, there can be less than 50 pax a day. He hopes that there will be an increase in passengers now that there is an array of tours to choose from. ■

Asian Buses met with Mohd Fazrudi B. Mohd Rohdzi, Head of Operation and Technical at Elang Wah Sdn Bhd to learn more about their operations in the Pearl of the Orient.





Yeap Transport Chooses Volvo Buses

The safe commute of several thousand children to school and back every day requires the right equipment, which Yeap Transport found in Volvo's buses.

Yeap Transport Pte Ltd, established in 1979, were the first operators in Singapore to be awarded a contract for school bus transportation. Today, the company has 456 buses serving around 12 000 children on a daily basis, across various schools in Singapore.

With three decades of legacy and success, Yeap Transport is truly a leader when it comes to managing and providing buses for transportation of children to schools in Singapore, and across the border. Safety of the drivers and the children on board has been the primary pillar for the company. This is one of the leading reasons Yeap Transport considers Volvo as the preferred choice for school bus transportation. Yeap transport is among the first few customers to have supported Volvo since its re-introduction into the Singapore premium coach market in 2017.

"To me, school operators and parents, the Volvo brand represents safety. With advanced technology and safety features, Volvo buses give me full confidence to provide better and more reliable services to my customers. My drivers are also happy driving and appreciate the features of Volvo buses. They feel safe behind the wheels," says Mr. Adrian Yeap, owner of Yeap Transport.

Yeap Transport has over the years built an impressive safety record of no accidents with serious injury. With the introduction of Volvo coaches, Yeap transport are confident this will help them carry on the impressive record.

Besides safety, parts availability was also a key factor when Mr. Yeap first decided to purchase a Volvo bus. A few questions that came to mind were: What is the volume of Volvo coaches in Singapore and whether the units will be well supported? Would there be sufficient spare parts? Where are Volvo parts stocked and what is the lead time for parts? The concerns are relevant and genuine. All of Mr. Yeap's concerns were addressed when he learnt that Volvo maintains commonality of parts for buses and trucks and Volvo's regional parts warehouse has been located in Singapore since 2001.

Reliability is an important factor in providing buses for school transportation. Not only does it ensure your buses are always on the road, but it also helps develop the trust among parents. Hence as service providers, it is not only

important to have a reliable bus, but also secured parts availability to increase vehicle uptime and productivity.

For successful operations, it is essential to minimise and control operating costs. Another reason Yeap Transport choose Volvo buses is that with Volvo, they have a well-planned, customised, multi-year, fixed price maintenance service contract. With this contract, operators can rest easy knowing their buses will be well maintained by Volvo technicians, at a Volvo authorised workshop, using only genuine Volvo parts. This is highly beneficial to operators as all their future costs are well known beforehand - with no surprises. This also allows operators to fully focus on scheduling operations while Volvo Buses, through its service dealer (ComfortDelgro Engineering), takes care of the bus reliability through regular servicing and parts replacement - as and when necessary.

As summarised by Mr. Yeap, "To buy a bus, it is not only a simple selection of the product, but also the brand, the services, and the total cost of ownership. These factors all come together as one solution. I know that Volvo Buses can satisfy this expectation and are able to provide me an innovative and sustainable transport solution to meet every need of my business." ■

ComfortDelGro Bus' ComfortConnect on-demand bus services.



If the response is good after the trial period, this will be ComfortDelGro Bus' sixth direct bus service. The other five services include the popular scheduled Tanjong Rhu to Shenton Way premium service.

Passengers can book a ride on this new service (after downloading the ComfortConnect app), just by selecting a stop as a pick-up point and another as a drop-off point, indicate the preferred date and time of the pick-up before selecting book. They will then receive an in-app notification once the ride is confirmed and another notification at least two minutes before the bus arrives. The bus will complete the ride even if there is only a single booking.

"ComfortDelGro Bus has been providing direct as well as first and last-mile shuttle services to and from residential areas where public transport coverage is less extensive. We believe that on-demand services have the potential to supplement conventional public transport services. Through this trial, we hope to gauge the commercial viability of on-demand services which will help us plan for new services in the future," said ComfortDelGro chief executive officer Pang Wen Heng in a statement.

Parkway Parade general manager Joey Teng welcomes the trial of an extra transport option for shoppers to and from Parkway Parade.

"It is a good initiative on the part of ComfortDelGro Bus in direct on-demand bus service. The service area includes our mall as it means greater convenience for our shoppers residing in the Tanjong Rhu and Meyer Road area," Teng said. ■

ComfortDelGro Bus Pte Ltd, one of the largest and most established land transport companies in Singapore, has launched its on-demand bus service called ComfortConnect in the eastern part of Singapore.

The ComfortConnect application can be downloaded into any smartphone devices, through Apple App Store or Google Play Store. The services are currently free during its three-month trial period, which started on August 15 and it operates from Monday to Friday between 10am to 4pm.

There is a total of 16 stops that serves the residents of Tanjong Rhu and Meyer Road, including the majority of the condominiums in both the area, Parkway Parade, Singapore Swimming Club and Dunman High School.

This is similar to the on-demand bus services that its sister company in Australia, CDC NSW, had launched in Woolgoolga and the Bella Vistar, Norwest and Hills showground suburbs of Greater Western Sydney.



Katching a Bus in Thailand

Our Thai contributor Chalakorn Setthabunnat, known as Katch, has an update on the minibus market in Thailand it may not be good news for everyone in the industry.

Here I'm back to write a column for Asian Trucker Magazine! Its been a while, I hope you still remember me! If you couldn't, let me briefly tell you little bit from the last column I wrote some time ago. I'm a girl who works in a family business and in man's world; who loves fashion and likes to post and take pictures of trucks or buses together with her high heels on. And I'm a girl who like to share about commercial vehicles everywhere I go (in my own style lol). Yep that is all about me. My life has involved the truck and bus business since I was born. Therefore, I have pretty much story to share with you guys even though I might not be a professional one but my intention is to learn, to grow and be better.

In my first story I had mentioned that I'm one of authorized dealerships for one truck brand. Just a few months later, I was awarded to be the authorized dealership for another brand as well, and this brand is the brand that I had always dreamed about, which is Mercedes-Benz!! I know some people might not be as excited as I am, but well this rural girl is excited! We can now sell both Mercedes-Benz truck and bus. By this time last year, around mid-July, 2018, my company had started off with Mercedes-Benz bus. The model that was available at that time was the OF917 with three wheel base variants: 4.250, 4.8, and 5.3 metres. However, we decided to focus on selling the 4.250 metre wheelbase only. The reason behind that was the expected change in legislation for minibuses.

According to Thailand's law and regulation at that time, the Government enforced to have minibuses to replace the commonly used vans. Minibus topics became so popular among the players in the bus industry. They came from everywhere: Chinese, Japanese or even European brands was trying to import either chassis or complete buses to serve the need of the market. The demand

for minibuses was high and it's like a gigantic cake that everybody knew will be served and everyone would like to grab as much as they can. More demand, more supply!? This theory seemed to work back then. Every brand tried to bring an unique point to sell and at the end they competed with each other with price. They created a price war among bus brands. Customers had various options to choose which brand they like the most. Some preferred quality over price, some preferred price over quality.

Every brand and by extension, bus body builders were to enjoy this big cake for a year. Then just a few weeks ago, the government announced that they are going to delay the van's replacement regulation. This definitely affects the whole circle of supply chain for bus business from the beginning to end; bus sellers, bus body builder, van customers, and end users. This drama is still going on in Thailand right now. What we can do? We can only wait and see. Personally, I hope that they would find a better solution for all.

Alright, today I wrote a lot to update on what is happening in Thailand right now. I hope you guys enjoy it and see you soon for the next column xx. 🍷



Volvo and Singapore

40 successful years of Volvo Buses in Singapore

Safe, efficient and environmentally friendly transportation for everyone — it's been the keystone of Volvo's worldwide mission since it started in 1927 and fiercely championed for the past 40 years in Singapore alone.

From the first air-conditioned buses bringing soothing relief from tropical Lion City heat back then to world-leading automated bus trials, now Volvo Bus has always led the way.

Laying one degree north of the equator, at the southern point of the 'Peninsula Malay', Singapore's humidity is ultimately best addressed by trying to mentally ignore it. Block it out at all costs, they say. Yet while that's still easier said than done these days, the 'uncomfortability' would have been exacerbated tenfold if stuck on a Singaporean bus circa 1979, as it made its way through crawling city traffic, with no immediate cooling relief in sight.

With the only thing moving fast being beads of sweat dripping down hapless bus commuters' faces, this was something that needed immediate addressing — which Volvo did in 1985 with its first trial of the AC B10M, when it brought in the first air-conditioned buses for Singaporean roads.



This, among many other advancements, upgrades and achievements, has undoubtedly made Volvo Bus the leader in the Lion City's public transport world.



we are proud and honoured to have gone some way to help facilitate that — for locals and tourists alike — during the past 40 years.

“Our technological advancements are of such value to what we are trying to achieve as a global leader in bus and public transport that the best of such endeavours are only realised when tested purely in cities and regions that truly bring out their best. “Singapore has been one of those areas and it was thus a logical choice for us — along with the government, tertiary and public support — to recently launch one of first major fully automated electric Volvo 7900 bus tests.

“Collectively, with the vital assistance of Nanyang Technological University, we’ll be helping shape the way such landmark technology is used and future, refining it with ultimate reliability, efficiency and — most importantly — safety in mind,” Mead explained.



Here, we take a nostalgic look at the company’s proud history of providing city and private transport solutions there for the past four decades.

Mission Statement

Volvo was founded in Sweden in 1927 and a year later its first bus rolled out onto the streets. The company started with a vision of safe and efficient transportation for everyone. Ever since, Volvo has been at the technological forefront and for decades it has maintained a solid position as the world leader in commercial transportation technology, it states.

Bringing its expertise to the Asian transport hub that is Singapore seemed an inevitable feat.

“It’s hard to believe it’s been 40 years since Volvo Bus first started supplying, maintaining and advancing its state-of-the-art buses here — particularly as a way for commuters to help beat the city’s tropical heat,” said Volvo Bus Asia-Pacific vice president, David Mead.

“It’s a unique urban environment given the comparative high cost of private-car ownership and Singapore’s Certificate of Entitlement, making public transport key to the success and very functionality of many people’s lives, so

A Legacy Begins

For four decades, Volvo Bus has enjoyed many firsts, brought new innovations, and provided great products and services to Singapore, it states.

In 1979 the Swedish giant landed a very large order to supply SBS Transit with a total of 350 units of B57 buses — at a time when local buses were not yet air-conditioned.

Throughout the 1980s Volvo continued to get orders for the B10M, one of the first mid-engined buses ever introduced into Asia, which served Singapore commuters well for more than 20 years.



As Singapore's population grew from around 2.4 million circa 1979 to more than 5.5 million as of 2017, so did Volvo Buses. It's been working tirelessly with local body builders to make the best complete bus unit that can be made, it states.

The European designed and engineered chassis are manufactured in Sweden and the body-builder partners — like Wrightbus, Volgren and MCV to name a few — add their bodies to it. Yet it is not so simple sounding as connecting a few blocks of Lego; Volvo Bus and the body builders have worked exceedingly closely to ensure supreme quality levels are met while there's a lot of adaptation required to meet the needs of local public transport expectations.

One of the biggest moments in the company's illustrious history was the launch of double-decker buses in Singapore. While it was British Leyland that made the double-deck bus concept famous around the world, it was Volvo Buses that bought out British Leyland Buses in 1989 and soon introduced 200 Leyland Olympian units to the market. These were the first three-axle double-deck city buses that were fully air-conditioned in Singapore.

A sensational hit with the local travelling public and transport operators alike, there was soon a



continued order of 470 Volvo Olympian three-axle air-conditioned double-deckers to come. As a concept, these double-decks became very popular thanks to their high passenger capacity — and to date Volvo has put in excess of 2500 of them onto Singaporean roads.

"...many other advancements, upgrades and achievements, has undoubtedly made Volvo Bus the leader in the Lion City's public transport world."

Firsts Upon Firsts

Population booms mean all types of bus sizing and configurations need to be factored in to maximise various-length routes at various peak and low times throughout the day. In 1996, Volvo chose Singapore as its launch pad for a very special product from its vast range, giving it the longest bus in Asia: the 19-metre B10 articulated and air-conditioned bus.

Along with a 14.4-metre three-axle rigid bus, the two niche products were uniquely tailored to local conditions in close collaboration with local body makers and they successfully served throughout their entire vehicle lives in Singaporean operation.



Bus Contracts – A Turning Point

While the history of Volvo buses in Singapore has been one of continuous development, a big change occurred in 2015 for the company when the Land Transport Authority (LTA) took control of the purchase of city buses, which they then leased to companies such as SBS and SMRT.

The 'Bus Contracting Model' — a new framework for transportation solution introduced by LTA to allow public bus services to be more responsive to changes in ridership and commuter needs — encouraged competition between bus operators. Prior to this, tenders were given by the particular bus operators looking to add to their fleets. However, under the Bus Contracting Model, local and overseas bus operators bid for contracts to operate public bus services on behalf of LTA.

The big impact of the Bus Contracting Model on Volvo was the growth of bus depots. Previously SBS had five depots where the maintenance work was done, while SMRT had three. When the LTA expanded the depots to 12, and Volvo buses started to operate out of all the depots, it meant parts and services had to be provided over a much greater geographical area, which it has expertly adapted to.

As per current expectations, in 2020 new depots will be added on the island meaning service, technical

It should be noted that Volvo Bus has been keeping in mind not only the performance of its products, but also the ease and comfort of the driver and its passengers.

In addition to bringing the first air-conditioned city bus to this tropical island, the first 'true low floor' city bus was introduced in 1999 with the B10TL (Super Olympic model) double-decker.

Merely three years later — in line with a city 'cleaner environment' project — the first 12 B10BLE-CNG units (featuring low entry, running on compressed natural gas) were delivered.

Additionally, as another first, to continuously keep up with the high standard of public transport service and exercising its due diligence in accommodating all local customers' travel requirements, Volvo delivered the Lion City's first batch of buses with wheelchair access in 2006.

"...accommodating all local customers' travel requirements, Volvo delivered Singapore's first batch of buses with wheelchair access in 2006."



support, and the parts inventory will again have to be expanded exponentially, which Volvo has already proactively accounted for.

Private Operators – Premium Coaches

Visitors from around the world will attest to how much of a major tourism hot spot in Asia Singapore is and its reputation as a leading global airline stopover is second to none. Once on the ground and with time to spare, visitors are well primed to take advantage of the Island's beauty and enchanting destinations — and this is where its coach travel sector comes in.

For most of its 40-year history in Singapore, Volvo did not get into private buses in a very big way. Until 2016 that is, when the company started putting more emphasis on this segment and now has a running population of 80 units on the road — and even across the border into Malaysia.

In terms of bespoke product, some coach units have been very specialised, with one unit even going to the Singapore Civil Defence Force as the basis of a special project. Another was sold to Singapore Airlines to be used as a maintenance and repair mobile workshop, which conveniently and safely attends to the aircraft wherever and whenever needed.

With longevity being the key, most buses will be used for 17 years based on local Singaporean regulation; however, the Volvo buses are built for reliability and durability that should last for more than 20 years, the company proudly confirms.

For private operators, Volvo offers the B8R 320hp fully automatic transmission chassis — mostly used in Singapore — and the B11R 430hp with the award-



winning Volvo I-shift transmission. This advanced piece of technology is more suitable for long-distance touring and city-to-city travel.

With global emissions standards needing to be met, both buses are Euro 6 compliant no less. So, who uses them? The near 30 international schools in Singapore are one of the users of Volvo's private buses. Coaches are utilised for 'transporting' both students and company staff. Yes, 'transporting'. For example, Yeap Transport Pte Ltd manages more than 400 buses, and they have become a loyal customer ever since the company started introducing premium coaches to Singapore, Volvo says.

Another leading customer is ComfortDelGro Bus Pte Ltd (CDGB), which bought close to 25 units to transport staff and tourists across the Island.

With the tourism segment constantly growing, Sentosa Development Corporation (SDC) has also been an avid supporter of Volvo with its full fleet of 25 units belonging to the brand, as well as SDC also taking the full-time service contract for 10 years, which was recently renewed.

Yet through word of mouth and proven success of the Volvo product in this particular business space, there's always been a growing fan base for Volvo Buses, with



companies like Travelzone Network Services, Metro Coach Services, Sin Ann Travel & Coach Services and Regency Travel Pte Ltd etc also happy to enmesh their tourist operations with the big Swede's comfortable, reliable and more environmentally friendly systems and support structures.

Solid Support

As a partner for successful business and as a vehicle manufacturer with an untarnished reputation, Volvo has a commitment to support every customer as best it can, it says. It does so not only with first-class, quality vehicles but also via processes, advice, and services in order to keep the customer's operation up and running, minimising downtime.

Partnered with ComfortDelgro Engineering (CDGE) since July 2000, Volvo provides a service package for a period of five years, which means the fleet owner doesn't have to worry about price escalation or the availability of spare parts, it explains.

"It is all locked in and guaranteed to keep the buses in operation. As a solely authorised service workshop, CDGE has been continuously improving its workshop facility and service level, keeping up with new technology and training staff to be able to deal with all the latest developments," Mead said.

"Not only do they enhance workshop support, but also provide on-site assistance with a fully equipped action service van 24/7."

In 2001, Volvo opened its regional parts warehouse for all Asia in Singapore. With this excellent access, for years Volvo Buses has been reaching parts availability

up to 98 per cent at customer level, it confirms. In fact, Volvo and CDGE pride themselves on driving towards 100 per cent uptime for their buses, says Volvo.

Zero Accidents, Fatality Free

The aim is as simple as it is noble: zero per cent accidents and fatalities in the region where Volvo's products and services are concerned. The company says it's always been at the forefront of technology with safety as its prime focus — and that proof is in the iconic, world-famous three-point seat belt. How so?

Volvo proudly talks of its development of such life-saving technology, which few will know it let other manufacturers have for free as the company believed it was in the public's best interests to do so.

Volvo also provides driver training for all bus drivers, regardless of if they are a customer. That is, if they drive

city buses or coaches, any driver can take the course. And Volvo has been offering this service for 30 years — again, and all for free.

“...few will know Volvo let other manufacturers have it [three-point seat belt technology] for free as the company believed it was in the public’s best interests to do so.”

Data is King

The complexity of the work needed to offer the safest, most comfortable and most environmentally friendly buses and coaches these days is increasing, with new technology rapidly developing and being integrated into the humble bus.

LTA helps drive this development as it looks for innovations that are commuter friendly — ones that are going to make more people want to take public transport and leave their cars at home. With new accessories constantly being added to buses this requires more coordination with suppliers — no easy task given timeframes, deadlines and other associated KPIs all ‘round.

To do so, Volvo says it also brings new ideas to its products and so new buses will, “...better meet the riders’ needs and increase safety for all road users.”

Telematics now is crucial, its data is key. This eminently important service for operators is instrumental in the success of their businesses and Volvo says it fully understands this and never underestimates that. And never will...

“Today’s buses are connected so the fleet owners can track their position and monitor how the bus is being driven. This is an initiative from Volvo, where we’re enabling them to further enhance and develop driver performance and further reduced fuel consumption — all the while increasing safety,” Mead explained. “Both active and passive safety features are developed and added to all buses as a continuous effort to Volvo’s vision to reach zero accidents,” he said.

Creating History

Forty years is a long time. Not the shortest of time for businesses to be in operation in a particular area, and not the longest either. Yet at just over halfway through the average age of a human lifetime it’s time spent well enough to anticipate what other advancements and ‘firsts’ Volvo Bus can bring to the Lion City in its next 40 years here.

Electro-mobility is a strong focus at Volvo Buses now and in 2018 it delivered the first 50 units of diesel-hybrid buses — the Volvo B5L — to the city. These highly efficient hybrids require no external charging infrastructure, and the batteries are charged during braking. Ever since the B5L hybrids hit local roads, passengers have been enjoying a smoother and quieter ride, with the average fuel saving for operators often reaching up to 40 per cent when compared with a diesel bus — based on proven data collected from these Volvo hybrid buses running in many cities around the world. Yet this is not the end.

On March 5, 2019 — as stated in partnership with Nanyang Technological University, Singapore (NTU Singapore) — Volvo launched the world’s first fully autonomous electric bus, leading the way in such new technology, it states.



One month later, two of the Volvo autonomous electric buses were involved in trials on closed public roads. The first operated in the NTU smart campus and the second is undergoing tests at a bus depot managed by local transport operator SMRT.

With Singapore working to be a leader in the development of autonomous vehicles, it’s arguably best placed to do so because of its goal to be a ‘smart nation’. Its advanced infrastructure and commitment to smart technologies undoubtedly bodes well for it in this regard. You can expect further developments as technology moves forward, especially in terms of the charging time of bus batteries and their ability to power Volvo buses for even longer distances, the company says.



Tomorrow's Future

Indeed, the past 40 years have been very exciting in terms of development and use of Volvo buses in Singapore. The next 40? Who knows? But Volvo Bus promises even more excitement in here, especially with the emphasis the LTA is putting on making the bus an important part of the city's transport system.

Add in the rapid development of new technologies that are changing both the way the bus is driven and is 'moving' an enhanced passenger experience, and Volvo guarantees it will be part of this amazing continued development. Creating history...
Leading the way... 🚦

A 40-Year Journey

- 1979 First bus order in Singapore: 100 units B57 single-deck city buses
- 1985 Launch of first mid-engined bus: the Volvo B10M
- 1991 Delivery of 200 Volvo Olympian fully air-conditioned double-deck buses
- 1999 Launch of first low-floor double-deck bus: the Volvo B10TL
- 2002 Introduction of the Volvo B10LE CNG bus
- 2006 Delivery of 200 Euro 3 Volvo B9TL double-deckers with wheelchair access
- 2010 Delivery of 450 Volvo B9TL Euro 5 double-deckers
- 2017 Introduction of first Euro 6 Volvo B8R chassis
- 2018 Launch of first Volvo diesel-electric hybrid bus for Singapore
- 2019 Launch of world's first fully autonomous electric bus in Singapore



Malaysia's First Electric Bus

EBIM (Elektrik Bas Inovasi Malaysia) is developed by Sync R&D, a local research and development firm that specialises in providing complete engineering solutions for product development. In 2011, the company decided that they needed to diversify their business method from contracting to developing their own product, hence the idea of developing an electric bus came about.

EBIM is a fully-electric city bus developed locally with inputs from bus operators, particularly RapidKL, on what operators expect of an electric bus. It is a market driven R&D project to meet the market needs and demands of not only the local market, but also for export purposes where the needs for an EV lie.

Azlan Merican, Chief Executive Officer of Sync R&D said "Prior to EBIM, Malaysian bus operators only had China as an option to purchase reasonably priced electric buses from. However, acquiring Chinese buses will lead to a major outflow of funds. For example, the plan by Prasarana to eventually replace all 2 000 buses with electric buses will lead to an outflow of RM3.4 billion to China."

Timeline

The process of developing the EBIM was a long and arduous one. It all began in 2011 with a feasibility study on the viability of the EV market in Malaysia and its applied technology. In 2012, the functional requirements of the EV

Sync R&D showcased Malaysian talent and innovation with the reveal of EBIM.

was determined as well as the unique selling proposition outline. Then in 2013, the conceptual, primary and detailed designs and in-depth analysis were conducted for the systems, structural, interior and electrical and engineering systems.


Components were then assembled onto a test jig in 2014. End products were replicated for testing and simulations. The first prototype of the EBIM was built in 2015 as a benchmark for design improvement. In 2016, the second prototype was built and tested for VTA certification compliance by JPJ and TÜV Rheinland. Beta units and development of the 10.5 metre bus started in 2018.



Technology

EBIM is made up of seven main components.

1. **Intelligent Driver Assist (IDA)** – Interactive touch screen instrument panel installed with real-time GPS assisted route monitoring system. Equipped with advanced parameter/telematic data logging system, a digital dashboard offer wide range of advanced menu setting within the keyless control system.
2. **Electric Axle** – Electric drive system with two wheel hub motors consisting of AC Synchronous motors running at high rpm and is capable of running at various frequencies with high torque through a single speed reduction system. The motors are liquid cooled and is completely sealed against water ingress and has been tested to withstand all weather conditions.
3. **Battery** – LifePo4 is today's safest cost-effective battery chemistry for electric vehicles. Minimising the risk of thermal runaway upon penetration, the battery is less likely to explode or catch fire in an accident compared to conventional lithium batteries or fuel. EBIM can run 200km on a single charge and has 6.5 years of service life.
4. **Motor Controller** – High power inverters are able to run at variable frequencies to power the traction motors at their most efficient speeds and highest torque. Liquid cooled with a myriad of fail-safes built into its own independent controller to ensure safe and efficient operation.
5. **Body Control Module (BCM)** – The BCM controls the integrated function such as interior and exterior lighting of the vehicle, relay the throttle position from the bus driver to the supervisory controller. Also implements driver authentication functionality together with intelligent driver assist system.
6. **Supervisory Controller** – Programmed to create electric boost modes for overtaking or hilly terrain as needed, in short bursts without overheating the system and still conserving energy during the overall drive. The supervisory controller is a proprietary designed universal electric controller unit (EUCE) for electric vehicles. This nifty device decides how much power flows to the wheels of the bus after evaluating a set of parameters to ensure that the system is safe for operation.
7. **Composite Monocoque Body** – This replaces the conventional steel chassis and aluminium body and is far lighter, stronger and corrosion-resistant. It has a longer service life and encounters minimal structural degradation over the course of its service life compared to conventional metal chassis. The composite monocoque offsets the battery weight and provides a safe cocoon to protect the batteries in case of an accident. EBIM ensures better occupant protection by keeping the batteries safe, light bus weight and dispersing energy uniformly throughout the body instead of a singular point of impact. It also weighs half the weight of a conventional metal chassis with a significantly shorter production time.



COMPLIED REGULATIONS

EBIM is designed based on the UNECE (Economic Commission for Europe) Regulation and Malaysia Road Transport Rules provided by the Automotive Engineering Division of the Road Transport Department of Malaysia, for Vehicle Type Approval (VTA).

R3 Reflex Reflector	R39 Speedometer
R4 Illumination of Rear Registration Plate Lamp	MS595 Safety glass
R6 Direction Indicator	R46 Device for Indirect Vision and It's Installation
R7 Front and rear (side) lamps, stop lamps, and end-outline marker	MS303 Installation of lights (HID)
R10 Radio interference suppression (electromagnetic compatibility)	R54 Pneumatic tyres (commercial vehicles)
R13 Braking	R79 Steering equipments
R14 Seatbelt anchorage	R89 Vehicle with Regard to limitation of their maximum speed
R17 Strength of Seats, Their Anchorages and Head Restraint	R91 Side Marker Lamp
R18 Protection against unauthorized use	R100 Battery electric vehicles
R23 Reversing Lamp	R112 Headlamps
R28 Audible warning devices	R117 Tyres With Regards to Rolling Sound Emission
R36 Construction of public service vehicles	R121 Hand Controls, Tell-tales and Indicator
R38 Rear Fog Lamp	

Trial

On the 25th of September 2016, EBIM made its first public appearance while making its way to IGEM 2016 at Kuala Lumpur Convention Centre. With an optimum speed of 65km/h and the capacity to carry 67 passengers, the EBIM successfully covered a 70km journey to the city centre and back to Shah Alam three days later on a single charge. It was a proud moment for the team at Sync R&D as their baby cruised down Federal Highway passing through several landmarks that symbolised our country.

EBIM has undergone various tests to ensure its road-worthiness, be it in scorching hot weather or a thunderstorm. The team also took the EBIM on a road trip to Tanjung Malim and back on a single charge. The real challenge was to bring EBIM up Genting Highlands and it was a joyous moment when



Benefits

There are various benefits that EBIM can offer to bus operators and the nation. It is a known fact that an electric bus reduces overall maintenance cost and down time. The EBIM has been developed to save more than 60 percent of maintenance cost with the use of components that require minimal maintenance. One perfect example is the full monocoque composite chassis and body that will not experience corrosion throughout its operating lifespan.

It goes without saying that buying a locally-produced vehicle will reduce the amount of money flowing out of the country. EBIM has 48 percent local development and content which could be increased as the manufacturing achieves its economies of scale of 200 units a year. It should be worth noting that EBIM was developed in line to meet all the government policies requirements such as NAP 2014, NKEA for E&E Industry and the National Electric Mobility Blue Print.

As EBIM is developed locally, it can be maintained locally without needing to rely on foreign participation. Chinese bus manufacturers will usually send their expert here to service and maintain the vehicle. With EBIM, in-house technicians and mechanics will be taught to service and maintain the vehicle to keep costs at a minimum.

Challenges

From 2011 till now, Sync R&D has spent almost RM 40 million in development costs. Some of it was borrowed funds from SME Bank with properties borrowed from friends of Azlan as collateral while some funds came from investors who were keen in the projects.

However, there has been no strong support from the government in recognising local developmental efforts by local talents in developing a product that was much-needed as a form of transportation. The Malaysian Investment Development Authority (MIDA) did cover part of the development cost through some grant in 2014.

It also took a long time to develop the EBIM. During the process, Azlan had to lay off many staffs in order to sustain the business. "It was a difficult decision as they are my family. It was also hard for them as they were all eager to see the birth of EBIM" he said.

EBIM parked at the lobby of First World Hotel. The road up Genting Highlands is steep and filled with sharp bends and yet EBIM managed to bypass other diesel buses.

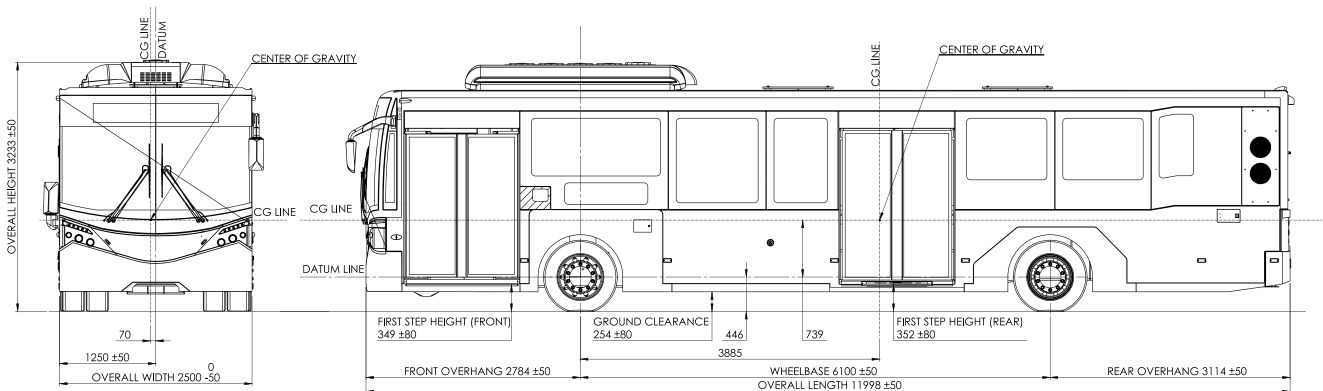
Designed and built to comply with UNECE regulations, EBIM passed JPJ's VTA certification on the 31st of July 2017.

Present

Now that EBIM is ready for commercialisation, Azlan hopes that the government can engage EBIM for a pilot program. He would like to work with the new government who has a vision of reviving the National Vehicle Industry and urge them to look into the electric vehicle industry. In a recent

survey by Transit Malaysia, 51 percent of voters hope to see EBIM being trialled in the heart of Kuala Lumpur.

Azlan concluded that he will have to look for foreign buyers if the Malaysian government does not pick up the EBIM soon. As it is, he has signed an MOU with an Indian bus assembler to start certification process in India that will meet India's Road Transport Regulations. This would eventually lead to commercialisation of electric buses in the Indian market with an average of 2 000 units a year. With the success of EBIM, the company has plans to develop a double-decker electric bus, an articulated bus system, an eight-metre electric city bus and a electric river cruise. 🚐



EBIM TECHNICAL SPECIFICATION

Dimensions

Length	11,998	mm
Width	2,500	mm
Height including air conditioning unit	3,233	mm
Wheelbase	6,100	mm
Front overhang	2,784	mm
Rear overhang	3,114	mm
Approach angle	7	°
Departure angle	7	°
Minimum ground clearance (axles)	150	mm
Minimum ground clearance (body)	254	mm

Passenger-carrying capacity

Seats (standard unit)	17	persons
Standing passenger (standard unit)	31	persons
Priority seats (standard unit)	3	persons
Wheelchair area (standard unit)	2	persons
Total (standard unit)	53 + 1	persons

Performance

Top speed	80	km/h
Max gradeability	18	°
Range	≥ 220	km
Turning radius	< 13	m

Battery

Type	LiFePo4	
Capacity	260	kWh

External Charger

Power	105	kW
Charging time	3.5	hrs

Air conditioning system

Cooling output	37	kW
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Chassis

Front axle (standard unit)	ZF RL 75 EC
Rear axle (standard unit)	ZF AVE 130 Electric Driven Axle
Suspension	Air suspension with ECAS system
Brakes	Front and rear disk brakes with ABS
Tires size	275/70 R22.5

Motor

Type	Built In Wheel Hub Motor	
Maximum power	2 x 125	kW
Maximum torque	2 x 10,500	Nm

Weights

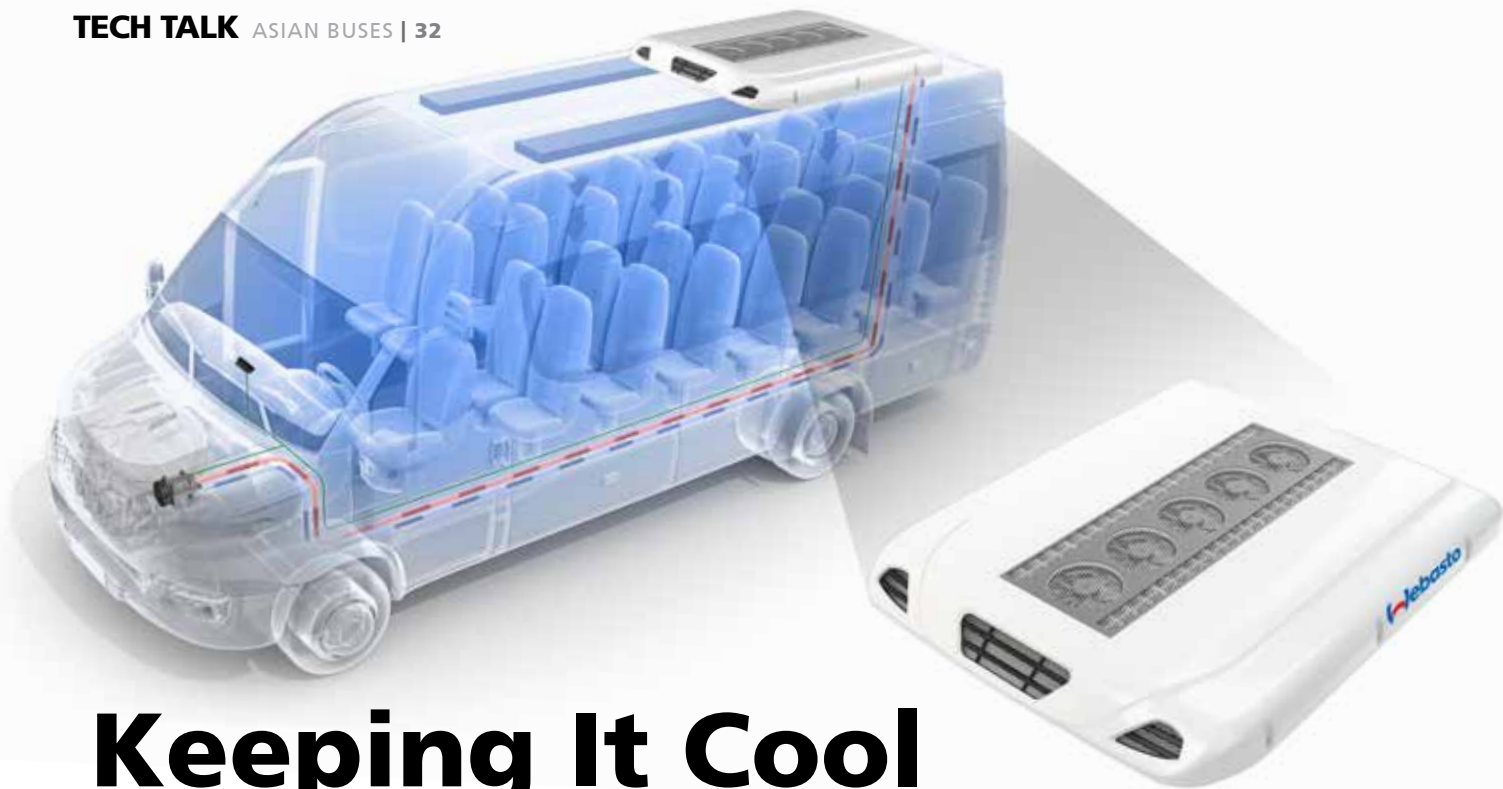
Kerb weight	12,840	kg
Gross vehicle weight	17,000	kg
Front axle rating	7,500	kg
Rear axle rating	13,000	kg

Doors

Entrance height	349	mm
Exit height	352	mm
Entrance width	> 1,200	mm
Exit width	> 1,200	mm
Floor height center aisle over roadway	415	mm
Standing height	2,405	mm

Regulations compliances

UNECE	R3, R4, R6, R7, R10, R13, R14, R17, R18, R23, R28, R36, R38, R39, R43, R46, R48, R54, R66, R79, R91, R100, R112, R117, R121
Road Transport Act	Malaysia



Keeping It Cool

This range of modular rooftop air-conditioning systems is designed for midi buses. The high energy-efficiency and -saving is achieved by an intelligent control of the condenser fans and the compressor. Thanks to the user-friendly maintenance concept, servicing is easier, and the life and efficiency of the components are longer.

Perfect comfort in all driving conditions is obtained by maintaining a constant supply of fresh air, even at the highest driving speeds. The heating option further increases passenger comfort. Installation is very fast and easy. The housings of these air-conditioning systems can be custom painted to match the colour of the vehicle.

Main Benefits

- High energy-efficiency and energy-saving via an intelligent control of the condenser fans and the compressor.
- User-friendly maintenance concept (easier servicing, longer life of the components, higher efficiency)
- Perfect climate comfort in all driving conditions thanks to a constant supply of fresh air, even at the highest driving speeds
- Easy and very fast installation

Technical Specifications Cool Top RTC 250, 300, 360

- Nominal cooling capacity (kW) 25, 30, 36
- Cooling capacity (kW) @ Tamb = 35°C, rel. humidity = 46 %, Tin = 27 °C: 20, 23, 28
- Refrigerant R134a
- Nominal voltage (V) 24
- Max. operation temperature (°C) 50
- Max. current consumption at 24V (A) (with forced fresh air): 76 (89) / 85 (97) / 101 (114)
- Max. volume flow of evaporator blower (ml/h) (free blowing): 4.000 (4.800) / 4.000 (4.800) / 6.000 (7.200)
- Fresh air at 120 km/h (%) 0 – 20
- Number of axial fans / radial blowers 3/4, 4/4, 5/6
- Dimensions L x W x H (mm) 2.500 x 1.988 x 210
- Nominal roof radius (mm) 8.500 / 15.000
- Compressor (cm^l) 470 / 470 / 560
- Weight (kg) 138 / 143 / 154 (Activities for weight reduction in progress)

Webasto can offer a complete rooftop range of air conditioners ranging from 4 to 36 kW. The target markets for their new Cool Top RTC 250 / 300 / 360 are all regions including hot countries.

Technical Concept for New Cool Top RTC 250 / 300 / 360 Materials

RTM for covers (Resin Transfer Molding): Stiff and structural, no deviations along the length, **NEW** material

SMC for evaporator's bins (Sheet Molding Compound): Industrial process (**NEW**)

Injection plastic for diffusors
Performances are guaranteed in extreme weather conditions
Big air inlets and large condenser (good air flow!!)
No recirculation in the condenser (supported by tests)
Capacity regulator of the compressor

Suitable for hot countries! Fresh air guaranteed in all conditions

Fresh air is supplied by dedicated blowers. Fresh air is ensured even at high driving speeds (with low outside pressure, air is pressurized by the

blowers). Thanks to this new concept, larger ducts possible for condenser. The control of single axial fans means an energy saving and thus money saving operation. Comfort is ensured through smart control of compressor, whereby the set point of temperature is reached gradually.

Technical characteristics

- High Performance: all units are tested according to ISO 5151 norm: Tamb 35°C, Tin 27°C, Hum. 46 percent
- Powerful blowers: Higher air mass flow referred to competitors (4800/7200 m³/h in free blowing; 4000/6000 m³/h @ 200 Pa) and Control linear speed (LPM control of blowers)
- Automatic control possible through ECU
- Only 4,5 kilograms of refrigerant


Ease of Maintenance

- Direct access to the fuses from Bbus
- Condenser is easily accessible (**sheet metal support for fans**):
* Longer life of condenser and * Higher performances
- Access to the main components as filter, etc.. from rear
- Access to fresh air blowers from front

Installation & service

- Low maintenance due to high quality components
- Easy maintenance because condenser fans compartment can be opened individually, direct access to refrigerant service parts, etc.
- Diagnosis-function thanks to ECU (electronic control unit)
- Easy installation as no support tools are needed to lift the unit on the roof (8 fixing points)
- Common parts with other units of the new Cool Top Family due to modular concept and standardized components

Safety & reliability

- High-quality and reliable components from proven series production or series manufacturers
- Intelligent control of the components and easier maintenance increase lifetime
- High reliability due to extensive product tests in own and external test laboratories
- Compliance with the common market standards thanks to the certification (CE, ECE R-10 type approval) 

Who is Webasto

Webasto is a global innovative systems partner to almost all automotive manufacturers and has been family-owned since its foundation in 1901. We develop and produce roof and convertible roof systems, heating and cooling systems as well as charging solutions and battery systems for electromobility. Our company is among the top 100 suppliers in the automotive industry.



Malaysia has recently pushed for B10 Biodiesel and discussions are underway to increase the content of palm oil in the biodiesel. Other ASEAN countries are considering B30. We look at the technical aspects for filtration for Biodiesel.

What is Biodiesel?

In the global bid to reduce gases emission, a renewable and clean-burning alternative fuel is needed and biodiesel is viewed as a candidate for this mission. As the name implies, 'bio' diesel is of biological nature and produced from living things. Plants feedstock for biodiesel like palm oil is used widely in Southeast Asia, for instance in Malaysia, is currently on B10 biodiesel and Indonesia has an aggressive target of B30 by year 2020 heading for an eventual B50 target. Thailand is currently following the trend with plans to make B10 into the mainstream. Other feedstock include vegetable oils like rapeseed (Germany and Europe), sugarcane (in Brazil high proportion of vehicles are already on biofuel), recycled frying oils and animal fats.

The term 'biodiesel' refers to pure alternative fuel and the B factor is widely used to indicate the percentage of biodiesel in a mix. B100 refers to 100% unblended mix. When blended the mix can contains biodiesel with petroleum diesel in any percentage. Commonly, biodiesel blends containing 2 percent (B2) to 20 percent (B20) of biodiesel are used in most diesel equipment with no or minor modifications. Higher concentration of biodiesel can be used but this will necessitate the modification of the engine to avoid maintenance and performance issues.

Biodiesel and the Importance of Filtration

Blue·maxx
 Fuel filter insert with gasket set
 E1450KP01 D381



Technical data

EDP	1212230000
EAN	4030776046816
Status	Available
Packaging unit	1 / 6 / 480

Additional information

10 Micron	
RME-resistant	Yes
part of	H1451K

Filtration issues with biodiesel fuels?

Biodiesel has a reputation for shortening the life of fuel filters. Biodiesel has properties that may affect the fuel and engine system negatively if no precautions are taken. Fuel filtration is designed to protect the engine from undesirable contaminants and water and in this aspect biodiesel pose a considerable challenge to filtration which include:

- **Microbial growth** – Microbial contamination has become more pronounced since the introduction of ULSD, ultra low sulphur diesel, since sulphur is an effective agent in microbial growth control. In the presence of water and air, microbe will thrive and multiply. To aggravate the situation, the usage of ferrous metal in the fuel system like the fuel tank and filtration presents the iron element which is essential for the growth of microbes. The microbial growth appears as a layer of sediment which will clog the fuel filters.



Micro organism growth with presence of water

- **Hygroscopic** – Biodiesel has a hygroscopic property which means it allows water to mix in it. Emulsified water in diesel will be harder to separate and that will be a problem for modern engines designed with water sensitive injection system.
- **Solvent property** – Biodiesel (B100) acts as a solvent and will effectively removes varnish and hydrocarbons that are deposited in the fuel system, like the tank. The varnish and hydrocarbon disintegrate in the fuel and present themselves as contaminants in the fuel.
- **Unstable behaviour** – Stored in unfavorable condition, the shelf life of biodiesel mix can quickly varies and deteriorate under the influence of light, temperature, air humidity. Chemical contamination and organic contamination are the consequences of an improper storage. Additives are commonly added to stabilise the chemical process with the storage tank.

- **Gelling in the cold** – The cloud point or pour point are used to measure the behavior of diesel fuel under cold temperature at which they will start to gel or thickens. Compared to petroleum diesel, biodiesel gel under higher temperature than petroleum diesel.
- **Glycerin and Soap** – There are also problems with formation of soap due to catalytic reaction with “non-ferrous heavy metal” (Cu, Ni, Pb, Sn, Zn) in Biodiesel. Glycerin which is a byproduct of soap production in biodiesel forms additional clogging to the filter media.



Soap formation due to presence of non ferrous metal

Common fuel problems and what can be done?

Fuel problems can originate from various sources: (1) biodiesel, (2) petroleum diesel fuel, (3) various types of contamination and deposits, and (4) problems with storage vessels and fuel delivery system components including improper filters or the lack of filters in the system.

In general, to address these problems, the most obvious and direct action is to ensure that the fuel source is of the highest quality and that there is a suitable and adequate filtration onboard the equipment to manage the problem.

Fuel filtration considerations when using biodiesel?

It is inevitable that the power system of an equipment will be affected to a certain degree when biodiesel is added to the fuel system. The impact may be variable and it depends on the user's knowledge of engine requirement. A modern, high efficient engine will demand higher quality fuel and biodiesel will definitely be a concern. Fuel from a reliable source and a properly designed or selected filtration plays a big role in allowing the engine to deliver what it is suppose to do. Understanding the engine's requirement and the property of


biodiesel, prepares the user not only for what to expect but also what to consider when it comes to protecting the engine from bad fuel quality through filtration. The shorter life time for the filter is the most evident shortcoming of a biodiesel and a suitable filtration will consider the following:

- A good multistage water separation system
- Suitable sealing material which is resistant against solvent nature of biodiesel
- Provision for heating element to avoid gelling in cold climate
- Use of material which does not encourage microbial growth or glycerin formation
- Media material which is capable to removing contaminant and emulsified water
- Media material good load holding capacity to address any possible clogging due the property of biodiesel
- When added as a supplementary filtration, a low differential pressure is crucial to avoid starving the fuel supply

What can Hengst offer?

Hengst offers wide range of filtration solutions to address the concerns with biodiesel. For starter, Hengst filters are RME (Rapeseed Methyl Ester) resistant. A RME resistant filter is fitted with materials that are compatible with the aggressive additives found in biodiesel and the inherent solvent nature. For example, seals material will not expand or degrade due to chemical reactions. In addressing application which are not equipped to handle biodiesel, Hengst offers the Bluemaxx fuel module for added protection for your equipment.

How does the Bluemaxx design manage biodiesel?

- Bluemaxx incorporated multistage filtration to address contaminant and water separation
- Incorporate multistage filtration to ensure water separation effectively
- Bluemaxx module is free of Non Ferrous heavy metal, which avoid further soap/glycerin formation
- Free of Ferrous metal that are essential for microbes growth
- Bluemaxx has been tested to have superior DHC and water separation efficiency
- Superiorly low differential pressure
- Optional heater 



Mitsubishi Fuso Launches Model Year 2019 Rosa Light-duty Bus

Fitted with new advanced safety features, significantly enhancing support for safe driving and complying with 2016 exhaust emission control regulations and meets 2017 heavy-duty vehicle fuel efficiency standards +10%, FUSO Rosa enhances comfort and allows for safer driving.

Mitsubishi Fuso Truck and Bus Corporation (MFTBC), one of Asia's leading commercial vehicle manufacturers under the umbrella of Daimler Trucks Asia, is pleased to announce that it will launch the 2019 model year Rosa light-duty bus that makes safer and more comfortable driving possible thanks to new advanced safety features and a refurbished interior. The new Rosa also complies with the 2016 emission control regulations and the 2017 heavy-duty vehicle fuel efficiency standards as well. The 2019 models will be available through MFTBC sales companies and regional sales units across Japan starting from October 2019.

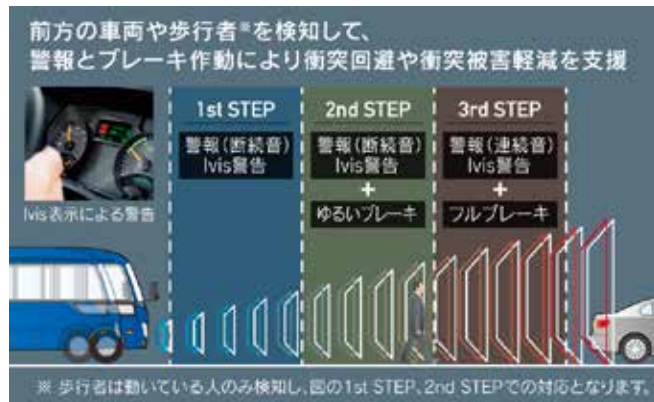
The new 2019 Rosa comes with advanced safety features that detects errors that could lead to an accident ahead of time, making safer driving possible. This latest model of the light-duty bus now has the Advanced Emergency Braking System (AEBS), the Electronic Stability Program (ESP)[®], which detects vehicle position and controls vehicle stability in the case of side slip or rollover, and the Lane Departure Warning System (LDWS). Furthermore, it also comes with the EZGO & Hill Assist hill start aid. Thanks to these features, the Rosa's ability to support the safety of passengers, pedestrians, and drivers is enhanced further.

Moreover, the new 2019 Rosa sports a revamped interior, enabling the driver to feel more at ease while sitting at the wheel. A wide variety of operational switches, such as the instrument panel shift, are placed efficiently in line with natural movements of the driver's hands while various indicators are located in the center. The new Rosa also comes with Bluetooth audio, making hand-free calls possible, and an AM/FM radio. These improvements can alleviate burdens on the driver while the passenger seat features a new type of material, making traveling in the Rosa a more comfortable experience.

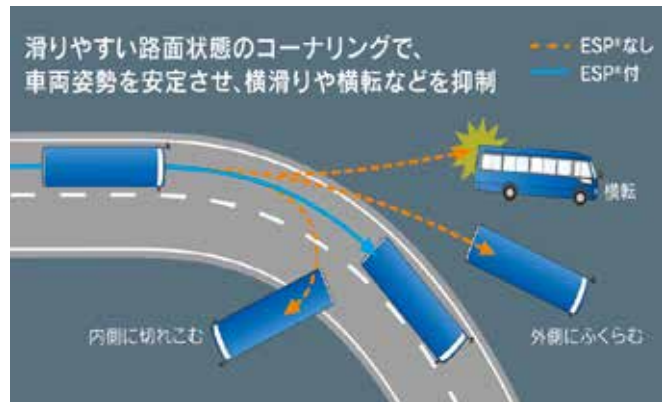
On top of these, in terms of the exterior, the Rosa adopts a cutting-edge LED headlamp* to ensure better visibility at night. The use of LEDs also extends the lamp's life, resulting in reduced maintenance costs.

MFTBC offers three body types for the Rosa depending on the intended use, namely, short, long and superlong. In addition, the Rosa is also available with special packages for sightseeing specifications that offers an upgraded comfort. With five types of interiors, the Rosa can be equipped with high-class illuminated equipment including LED line lights, which offer a more comfortable and exquisite riding experience for passengers. Besides the enhanced safety features, improvements in both the interior and exterior of the Rosa enable more comfortable and safer driving. The company will offer the Rosa with the aim of reducing the burden on drivers by improving their work environment, and alleviating the pressures of driver shortages in the Japanese transport industry.

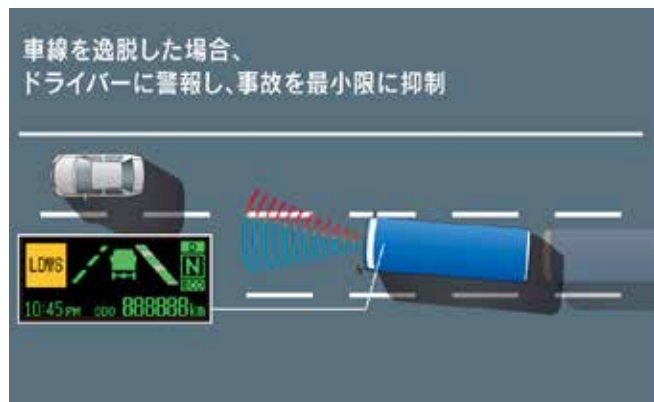
2019 Rosa Light Bus: Main Features



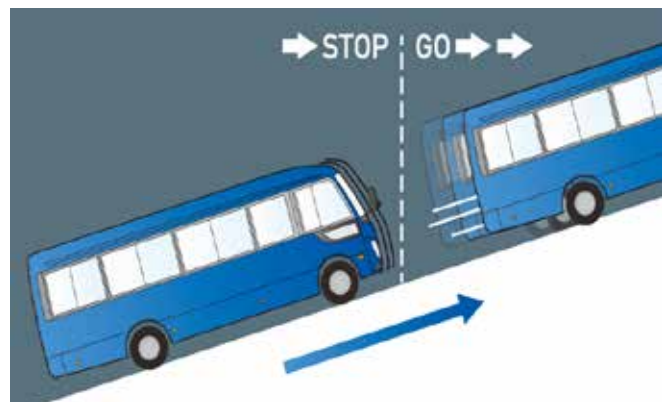
A millimeter-wave radar installed in the front bumper detects moving or stationary vehicles, as well as pedestrians crossing. When detecting danger of collision, it emits an alarm and activates the brakes automatically as the situation demands, thereby minimizing the damage when a collision is unavoidable.




The ESP detects a vehicle's stability through a sensor. Should it detect any risk of skidding or overturning on corners, it controls the engine's output or the four wheels' braking force, thereby helping avoid danger.



When a vehicle departs from its lane without giving a directional signal on a freeway, for instance, its white lane recognition camera detects the departure, urging the driver to drive safely with warning sounds and notifications on the Ivis (multi-information system).



EZGO is a device that maintains braking force until the clutch is engaged and the vehicle starts. The Hill Start Assist Function is a device that maintains braking force for several seconds after the brake pedal is released. Both functions improve the stability of a vehicle on a slope. 





Four More Kingo Variants from R & A

R & A Marketing Sdn Bhd (a subsidiary of Sendok Group), a sole distributor of King Long Minivan in Malaysia since year 2010 has launched the new CAM Kingo series, a new van series under King Long at The Square, Publika, Kuala Lumpur on the 19th July 2019. Sendok Group is also celebrating the commemoration of ten years cooperation with Xiamen King Long United Automotive Industry Co., Ltd.

The launch was officiated by Guest-of-Honour Yang Berhormat Dr. Ong Kian Ming, Deputy Minister of International Trade and Industry, accompanied by Mr. Gwee Bok Wee, Group Managing Director & Chief Executive Officer, Sendok Group, Mr. Simon Xie, Managing Director of Overseas Sales & Marketing, Xiamen King Long United Automotive Industry Co.Ltd.

The event was also attended by Dato' Hj Wazir bin Hj. Muaz, Group Chairman of Sendok Group, Mdm Lau Kiat Hoon, Group Executive Director of Sendok Group, Dato' Ir Hj. Mohamad bin Dalib, Group Advisor (Automotive Department) of Sendok Group, Mr Azlan Shah bin Al Bakri, General Director of APAD, Dato Ooi, Head of Marketing & Advisory of PUSPAKOM and Datuk Aishah Ahmad, President of Malaysia Automotive Association.

CAM Kingo series is available in 4 different variants, and by far the most complete van range in town. It is available in Kingo Ute Window, 15 seater basic spec; Kingo, 15 seater comfort spec; Kingo Plus, 18 seater comfort spec; and Kingo Ute Panel ; high roof panel van with 9.2m3, which is the biggest panel van in its class. Available in difference sizes and specifications, it is best in value, versatile and practical for various commercial applications. The addition of CAM Kingo series complements the current CAM van range and fills up the current vacuum in its class.

The CAM Kingo series comes in powerful 3.0L Common Rail Turbo Intercooler Euro 3 diesel engine with the max power output of 110kW/3400rpm and max torque of 370Nm/ 2000rpm. It is equipped with LED daytime running

light, halogen projection headlamp, chrome honeycomb grill, sporty 16" alloy rim, double rear cooling coil unit with nine air vents, semi fabric seats and dual sliding door. It also comes in full safety features of ABS+EBD and reverse camera with sensor.

Widely used as a comfortable people transporter, CAM Kingo series is also applicable for courier service & logistic, factory bus/ school bus, semi-panel van, ambulance, hearse van, and utility van. The new CAM Kingo series is targeted towards new business owners and companies who wish to increase or upgrade their fleets.

The CAM Kingo series comes with five years or 150 000km warranty (applicable for private & commercial registration) whichever comes first. It is also supported by 24/7 hotline, CAM nationwide 65 service dealers and free nationwide towing service within the warranty period. The selling price of CAM KINGO Series starts from RM99 000 (selling price only). As part of launching promotion, free dash cam or exclusive CAM carpet will be given out upon purchase of the new CAM Kingo series.

Specification

KINGO

KINGO PLUS

ENGINE

Engine	DK5
Engine Type	In Line 4 Cylinder Commonrail Turbo Charge With Intercooler Diesel Engine
Bore x Stroke	96 x 103
Emission Standard	Euro III
Displacement (L)	2.982L
Rated Output (kW(HP)/RPM)	110(148)/3400
Max. Torque (N.M/R.P.M)	370/2000
Compression Ratio	17.3:1
Top Speed *	135 km/h
Fuel Standard	Euro-III Diesel or Above
Fuel Tank Capacity (L)	70 Litre

DRIVING SYSTEM

Transmission Type	Manual 5-Speed
Gear Ratio	1st: 4.313, 2nd: 2.330, 3rd: 1.436, 4th: 1.000, 5th:0.838, Reverse: 4.220
Clutch	Single Disc, Hydraulic Control
Driving Type	Front Engine, Rear Drive
Brake System	ABS+EBD, Intelligent Brake Assisance System Front Disc & Rear Drum
Suspension	Front Transverse Double Wishbone Independent Suspension, Rear 4 Ply Leaf Spring

TECHNICAL DIMENSION

Overall LxWxH (mm)	5470 x 1885 x 2285	5998 x 1885 x 2285
Wheelbase (mm)	3110	3720
Ground Clearance (mm)		169
Gross Vehicle Weight (kg)	3500	4000
Curb Weight (kg)*	2415	2680
Seating Capacity	15 Seats	18 Seats
Tire	205R/15C	215/75R16C
Minimum Turning Radius (m)	12.2	14.5

FEATURES AND ACCESSORIES

Audio Systems	DVD+SD Card Slot	
Stereo Speaker	6 pcs	
Reverse Camera	•	•
Reverse Sensor	•	•
Cabin Light	•	•
Seat Material	Black PU & Lint	
Last Row Hanging Seat	•	•
Intermittent Front Wiper, Rear Wiper	•	•
Rear Windscreen with Demister	•	•
Tiltable Steering Wheel	•	•
Central Locking	•	•
Remote Control	•	•
Side Mirror with LED Turning Signal Lamp	•	•
Side Mirror Adjustment	Power	
High-Mounted 3rd Brake Lamp	•	•
Projection Headlamp with DRL	•	•
Front Fog Lamp	•	•
Wheel Size	15" Alloy	16" Alloy
Air-Conditioner - Front	•	•
Air-Conditioner - Rear	6 Air Vents	9 Air Vents
Rear Evaporator	Double	
Middle Console Box with 3 Cup Holder	•	•
Luxury PVC Roof Lining	•	•
Side Window	4 Sliding	
PVC Floor Mat	•	•
Power Window - Driver & Co-driver	•	•
Anti-Glare Rear View Mirror	•	•
Seat Belt	•	•

*Data collected under testing conditions. The final results may differ due to different driving conditions, overall vehicle weight etc.



usbuilder of the Year 2010

National Technology Center

Exempted from Export Inspection

VCA Certification

TS16949:2009

3C Certification

China Top Brand



During the launch, Mr. Gwee Bok Wee, Group Managing Director & Chief Executive Officer of Sendok Group says that,

“In conjunction with the revised New Automotive Policy (NAP), Sendok Group plans to bring in Green Vehicles in expanding its vehicle range. The CAM Kingo series will expand to include the Electric Vehicle, whereby King Long, in China readily have the technology and technical know-how of the products.”

Mr. Gwee says that Sendok Group’s turnover under the new commercial vehicle segment has grown to RM300 million last year during the past ten years and is building a new manufacturing plant with plant size of ten acres (400 000 square feet) located in Klang, targeted to be ready in year 2020, in order to expand the market. A total investment of RM50 Million is being invested in the project.

“In conjunction with the Industry 4.0 application, the new manufacturing plant shall also adopt more automation and digitalization. With this new production capacity, Sendok

Group targets to be able to cater to the bigger demand of South East Asia market and to capitalize on the ASEAN Free Trade Area and move towards the international market.” added Mr. Gwee Bok Wee.

Commemoration of ten years cooperation between Sendok Group and Xiamen King Long United Automotive Industry Co., Ltd.

In the year 2010, Sendok Group brought in the first unit of King Long Placer CBU into Malaysia, which also signifies the venture of Sendok Group into new commercial vehicle line and the embark of King Long minivan in Malaysia.

King Long Placer has been titled “The Most Economical Van” in Malaysia since then. It is popular for companies and corporates as excursion vehicle, school bus, goods carrying van etc. Along the ten years, King Long minivan has been well accepted by corporates and public in Malaysia.

R&A Marketing Sdn Bhd now carries King Long Placer and CAM Kingo series, totalling eight variants of vehicle from Xiamen King Long United Automotive Industry Co., Ltd.

Xiamen King Long Marketing Director, Mr. Simon Xie said in his speech “Today, we are gathering here to witness the launch of CAM Kingo Series, a new van series from King Long. On behalf of Xiamen King Long United Automobile Industry Co., Ltd, I would like to express my best gratitude to all guests attending this event today.”

As the pioneer of bus manufacturing industry from China, King Long has been leading the bus industry for the last 30 years in terms of product and technology innovation. King Long products range from Minivan to middle bus

and coach. With a production capacity of 500 000 units, we have delivered totally more than 600 000 units buses, among which 100 000 units in 136 countries and regions. King Long tops itself in terms of export volume for the last few years and will continually maintain its position in the future.

With the heavy investments in technology, King Long made some progresses in the artificial intelligence and the technology of new energy products, which simplified by the mass production and operation of our Auto-Navigation models, the technology of which are still refused to other manufactures.

2019 is the 1st year after King Long's 30th anniversary, and it is also the 10th anniversary of the cooperation between King Long and Sendok Group in Malaysia market. Since its first batch of sample orders placed in May 2009, Sendok Group has gradually become a very important partner of King Long in its global development strategy. With the endeavors taken, Sendok presented King Long minivan into the market with the image of great responsibility and assembled locally later.

With the experiences and knowledge gained from Malaysian market in the past years, the Kingo was upgraded. "Hereby, I promise that King Long will bring highly quality products and will support our customers with better after-sales service, so as to guaranty the efficiency of King Long products in Malaysia."

The friendship between China and Malaysia has a long history. The bi-lateral trade and cultural cooperation has become increasingly close. As a representative of Chinese brands and Chinese manufacturing, King Long Bus will continue its work with Sendok Group to create a better future. 🚐





The New Solaris Trollino 24 Bi-Articulated Trolleybus

During a press-meeting with European trade-journalists Polish manufacturer Solaris revealed in the Polish city of Gdynia its new 24 metre bi-articulated Trollino trolleybus. Solaris now also can offer for its trolley buses the possibility to drive without a connection to overhead wires by making use of batteries and even a fuel cell range extender.

The 24-metre bi-articulated Solaris Trollino 24 is currently in Gdynia, undergoing its homologation tests where the European journalists had the brief opportunity to get acquainted with this new Solaris bus. The Trollino 24 will be officially launched at Busworld in October. The driveline exists of two traction motors propelling two drive axles. This new Trollino 24 has a GVW of 38 000 kg, a capacity from 180 to 200 people, its maximum speed is 70 km/h, the air condition has an electric compressor (3x400V) and also the heating is electric. Solaris offers the possibility for in-motion charging and plug-in. The batteries it uses for in-motion charging are 58 kWh.

Now also Solaris offers the possibility for a fuel cell range extender in the trolleybuses for a maximum range of up to 100 km without connection to the overhead wires. The high-power batteries in the vehicles are recharged during the drive by means of a fuel cell. Solaris find that High Power batteries because of their high-power density, are a perfect solution for trolleybuses and hydrogen vehicles with the need for fast charging. Also, they provide a long range on a single charge. The latest from Solaris are the High Energy + batteries. The very high energy density of these batteries

should give a vehicle the possibility to cover distances up to 200 km on a single charge.

Solaris says it is the leading manufacturer of trolleybuses in EU and EFTA states with 40 percent market share. The Polish manufacturer has delivered since 2001 1342 trolleybuses to 50 cities in 17 European countries. Solaris realized a turnover in 2018 of 438 million euro and it sold 1 226 buses last year and expects to realise a significant growth of around 30 percent to 1 600 buses this year. 

Solaris Trollino 24 - technical details

- GVW: 38 t
- Total passenger capacity: up to 200 people
- Number of seats: 53 seats (16 low-floor seats)
- Total length : 24,17 m
- Width : 2,55 m
- Height : 3,45 m
- Front overhang : 2,7 m
- Rear overhang : 2,75 m
- Wheelbase 1-2 : 5,9 m
- Wheelbase 2-3 : 6,0 m
- Wheelbase 3-4 : 7,35 m
- 4 axles: 1. steering axle 2. drive axle
3. drive axle 4. pneumatic steering axle
- 2 traction motors 2 x 160 kW
- 1 traction container on the 1st wagon's roof
- 58 kWh traction battery on the 2nd wagon's roof
- In motion charging



Lifestyle Goods for Bus Captains

Stefan Pertz takes a look at the needs of bus drivers, when they are on the road and when they get to enjoy precious time at home with their family.

In a recent event of a bus maker a participant won a watch in the lucky draw. Presented in a sleek box, this accessory was nothing short of high fashion. Another company featured a jacket made from fan belts, a rather radical approach to fashion for our industry. I was thinking about this and how bus drivers also need and create items around their profession to express themselves.

Practical and Comfortable

What one can immediately observe is that bus drivers wear practical and comfortable clothing. It has to be attire that is suitable to work inside the cabin as well as outside. In the climate we are in, surely leather pants are not very much in demand as they would heat up quite some. Cargo pants are widely used as drivers of commercial vehicles always carry their most important items with them when they step down from their vehicle. Being able to have a few tools along also impacts the way clothing is designed.

We have, over the past years, reported about how their working conditions impact their lifestyle. When we host corporate people, they are by themselves. However, bus drivers, especially those driving to other countries, spend a lot of time away from the family and whenever possible, they bring their next of kin along, making every event a family excursion. It is at such events where the lines between family time and work are vastly blurred. Unfortunately, there are very few events being hosted to bring truckers together and to accommodate their needs.

Corporate Gifts

One of the biggest hits as corporate gift is a toiletry set that drivers can take along on their travels. When on the road, the facilities bus drivers use are oftentimes limited and these nifty kits make their life just a little bit more comfortable and easy. Perhaps it is such accessories that bus makers should be thinking of including in their vehicles?

Food is, of course, a favourite topic in South East Asia and a healthy diet is what doctors, ministries and other organisations advocate. Throw in sports and you have a "Healthy Lifestyle". This is not always something that is easy to do if you are on the road all the time. Scouting the rest stops up and down the country, I notice that the food available may be cheap and tasty, but not necessarily healthy. When we tell bus drivers to be more health conscience, then that is only half of the story as we would need to enable this to happen. A salad is something you won't find at any of these stops.

Opportunity Awaits

For now, what I see is a big untapped market, created by the people that move our goods. If we can create a specific lifestyle for other professions, for example lawyers, shouldn't we also create more items and spaces that suit the needs of our drivers? Seeing how family time is limited and precious, this could be something where we can start to work on creating an image that would be positive and suitable to attract youngster to take up the profession.

Whenever I attend a launch of a new bus, the manufacturers usually talk about the improvement of the performance. But rarely does one talk about how the vehicle is meant to support a life on the road for the drivers. In my view, there is more to the lifestyle of a bus driver than giving him or her a shirt with the logo of their favourite truck brand. ■



Telematics solution provider Atilze Digital Sdn Bhd's believes its Smart Mobility solutions could make Malaysian roads safer.

"No matter how many vehicles you have, you get the best Smart Mobility solutions - Fleet Management System (FMS), Advanced Driver Assistance System (ADAS), Driver Monitoring System (DMS), and Network Video Recorder (NVR)," said its marketing manager Firdaus Rahim at an interview with Asian Trucker.

The company was founded in 2014, with its core focus in three verticals - Artificial Intelligence (AI), Smart Mobility, and Smart IoT (Internet of Things) solutions.

"We saw the need to venture into smart mobility business even though there were already many fleet management solutions out there because almost none of them can offer a solution that can prevent an accident. The numbers of road accidents and deaths happening in Malaysia is alarming and our solution uses AI camera to monitor the road ahead with the option to detect driving behavior accurately.

Atilze's Smart Mobility solutions.

"We are simplifying the solution and make it affordable with a subscription package, so that our customers' fleets can get around safer, greener and more efficient," its product director Azman Ismail said.

According to the Bukit Aman Traffic Investigations and Enforcement Department director deputy commissioner Datuk Azisman Alias, the total accidents rose by 2.7 percent to 548 598 cases last year, compared to 533 875 cases in 2017.

In another report by the World Health Organisation (WHO) for 2016, Malaysia was ranked third highest for road accident fatalities in ASEAN and Asia, with a death rate of 23.6 per 100 000 population.

Thailand made it to the top of the list with a death rate of 32.7 per 100 000 population, followed by Vietnam with a death rate of 26.4 per 100 000 population. The lowest death rate was achieved by Singapore with 2.8 per 100 000 population.

Meanwhile, for Atilze's AI vertical, the company has partnered with SenseTime Group to work on a USD\$1 billion investment AI Park in Malaysia. As for the Smart IoT vertical, it is all about sensors, where the company collects the data, process, and comes out with the results.



"If the driver is distracted, on the phone or showing signs of fatigue such as yawning or eyes closing, the system will trigger to alert the driver. The system will monitor the driver for the entire journey to keep the driver safe and alive," Azman said.

Azman elaborate that DMS is most suitable for bus industries or even for long haulers, where the drivers' get fatigued during trips.

NVR

The last solution available for the Smart Mobility vertical is the NVR. NVR is about surveillance and security cameras.

"If a fleet manager wants to see what the driver is doing in the cabin, or how the goods are being transferred after it arrived at the destination, they can monitor it live," said Azman.

The system features four cameras, one in the cabin, one behind the vehicle, another in front of the vehicle and one at the side.

Moving Forward

Azman revealed that Atilze is currently working with the Malaysian Institute of Road Safety Research (MIROS) in setting a benchmark for the Malaysian Drivers Score (MDS) system, a national agenda.

"MDS is endorsed by Miros. The aim is to provide the authorities or insurance companies a single platform, where we can measure the score of every single commercial vehicle driver, just like the Central Credit Reference Information System (CCRIS)," Azman said. 📱

Mobileye

Mobileye - the ADAS system, is Atilze's bestselling product. It has sold more than 32 million units globally. The former is also the sole distributor for Mobileye products in Malaysia.

ADAS helps to prevent accidents with features like Lane Departure Warning, Intelligent High Beam Control, Pedestrian Collision Warning, Forward Collision Warning, and Speed Limit Warning.

Lane Departure Warning will alert the driver when there is an unintentional deviation from the driving lane, while the Intelligent High Beam Control will automatically raise and lowers the high beams on dark roads without nearby traffic.

The Pedestrian Collision Warning warns the driver during the day, before an imminent collision with a pedestrian or bicyclist. At the same time, the Forward Collision Warning notifies the driver of an imminent collision with a vehicle or motorcycle ahead, up to two seconds before a collision to allow the driver to react. Lastly, the Speed Limit Warning is a system that recognises traffic signs and speed limit signs. It will warn the driver if the vehicle exceeds the posted speed limit.

It was reported that the system can reduce accidents by 82 to 100 percent.

Azman explained that the system can determine whether the driver is tailgating the vehicle closely and driving very aggressively.

"There is a total of three zones - normal, level 1 & 2. If the driver goes into the level 2 zone and continue to drive aggressively and have no signs of slowing down, then the system will continuously beep loudly to alert the driver," Azman said.

Azman mentioned that all the alerts have a timestamp system that will be captured in the FMS for reporting and review purposes by fleet managers.

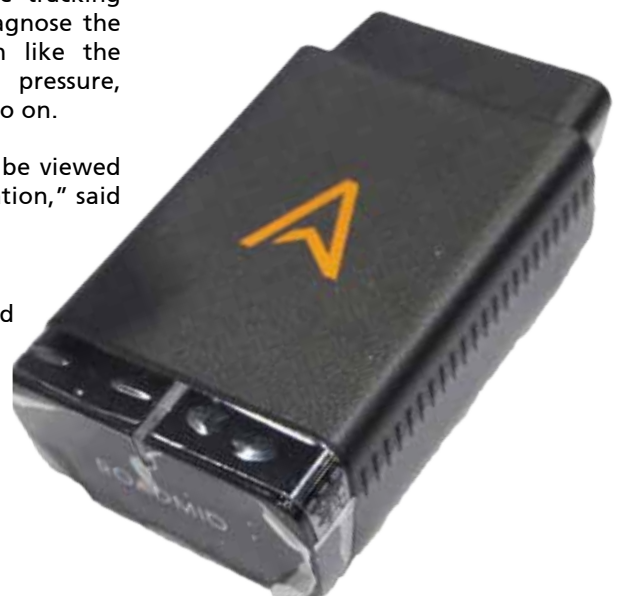
FMS

The FMS is like a vehicle tracking system that is able to diagnose the vehicle with information like the battery condition, tyre pressure, engine temperature and so on.

"All this information can be viewed in a mobile phone application," said Azman.

DMS

Another solution provided by Atilze is the DMS. It is a system that could capture the drivers' face reactions, to make sure the driver is awake and pays attention to the road.






It could not have been a “better” timing to discuss the subject of climate change and how all of us can make a difference when Scania Malaysia and Singapore switched off the lights, PCs and other appliances on Friday 20th of August. The activity was to be carried out in all Scania locations globally, with some 50 000 personnel attending.

Reminding of the impact of human behaviour was a thick curtain of haze when Tom Kuiphuis, Scania’s Pre-Sales Director, Southeast Asia, explained to the staff of Scania what the activity is all about. Going through a number of presentations and a quiz, members of Scania were to be made aware of the impact that certain measures can have in order to reduce an individual’s footprint. “If we are part of the problem, then we need to be a part of the solution as well,” he said.

Henrik Henriksson addressed the assembled staff in a pre-recorded message to highlight the importance of the discussion and initiative. Later on, several departments presented ideas on how to be more environmentally friendly. For example, computers can be switched off when not in use during the lunch break and old mobile phones and PCs are refurbished and offered to staff to give them a second life.

During the session, Kuiphuis also encouraged staff to come forward with ideas on how to become more environmentally friendly in the Scania Malaysia Headquarters. These ideas are to be collected and implemented if feasible. Ideas with other Scania offices were exchanged in a live-broadcast that had been arranged. 

Scania Goes Dark to Raise Awareness for Climate Change



SPECIAL OFFER FROM ASIAN TRUCKER!

Books dedicated to wheel alignment, more so on wheel alignment for commercial vehicles, are very rare indeed. You will not find them in bookstores. Wong Thiam Boon has poured decades worth of experience into this book and you can now buy it from Asian Trucker for a special price.

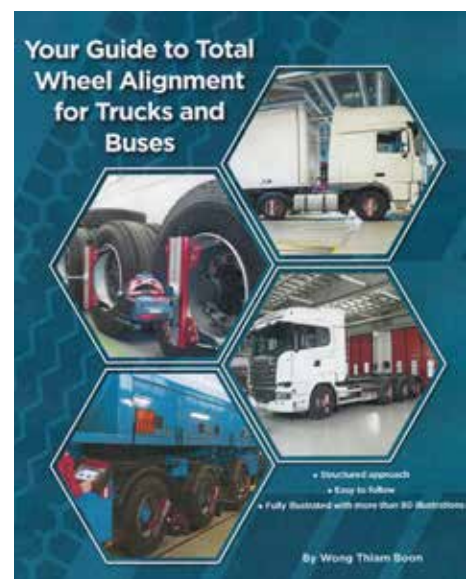
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“This practical and resourceful book will be an asset to any fleet operator or workshop that wants to improve the performance of commercial vehicles. It is TB Wong’s experience of decades working with wheel alignment systems that shines through and makes this a must-have item for anyone that is serious about their transportation business. The industry had to wait far too long for a resource like this and I am excited to see TB Wong’s knowledge now being available to the market.”

Stefan Pertz,
Editor, Asian Trucker Malaysia
Editor, Asian Buses

Available from Asian Trucker. Order via info@asiantrucker.com



Charged in Seconds, the E-bus can Stay on the Road All Day Long

ABB and King Long Motor Group have signed an agreement to jointly develop an e-bus with world's fastest flash-charger for China's booming battery-electric public transportation market.


The e-bus will feature ABB's TOSA flash-charging system that tops up the battery in just seconds while passengers get on and off the bus. This avoids the need to take the vehicle out of service for recharging every few hours or having a replacement bus ready, thus minimizing the size of the fleet.

For demonstration to customers, the partners are building a pilot project in China. King Long will design and

assemble the e-bus, while ABB will provide the TOSA flash-charging solution consisting of a wayside feeding station, an energy transfer system and an onboard battery charger.

The fast-charging solution requires no costly overhead lines. It enables public transportation companies to deploy emission-free, noiseless e-buses in a cost-effective and environment-friendly manner.

"Taking less than a second for the overhead arm to connect and for battery charging to begin, ABB's TOSA brings speed and flexibility to battery charging, making it the ideal solution for high-capacity, high-

frequency routes," says Niklas Persson, Managing Director of ABB Power Grids' Grid Integration business line. 

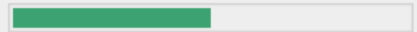
Snap Poll

Is Malaysia Ready to Fully Electric Buses?

No - 50%



Yes - 50%



The voting for this poll has ended



Scania Singapore Relocates Service Centre

(Singapore) Scania Singapore has relocated its Benoi service centre to Tuas, to serve its customers at a more convenient location near the new Tuas Mega Port.

The new Tuas Service Centre commenced operations in July. Equipped with three vehicle bays and staffed by professional service technicians, the Tuas Service Centre will offer vehicle maintenance and air-conditioning services to maximise uptime and operating economy for customers.

As a satellite service centre, the Tuas Service Centre supports the main Senoko Service Centre, which will continue to offer a full suite of repair and maintenance services.

Customers can book an appointment at +65 6861 9181 and visit the new service centre at 110 Tuas South Avenue 3, #01-32 The Index, Singapore 637369. It operates from Mondays to Fridays from 8.00am to 5.00pm, except public holidays. 

Indonesia Prepares Procurement of 41 000 Electric Buses

The Indonesian Ministry of Transportation is preparing to procure 41,000 electric buses to organize public transportation around Jakarta, reports the Indonesian based website Haltebus.com. It quotes the Head of the Jabodetabek Transportation Regulatory Agency (BPTJ), Bambang Prihartono, who stated this in a recent discussion on transportation in Jakarta. It will be a five-year plan with a batch of the first thousand electric buses to come in operation next year.

Public transport is rapidly increasing in and around Jakarta. It doubled in the last two years, according to Bambang. This of course has its effect on the environment in the city. In the governments medium and long plans, electric buses have been included as

a means of minimizing the environmental impact of the large community movement. Bambang said that Transjakarta already has an electric bus plan. In the first phase, there was a PPD that tried and ordered electric buses from Mobil Anak Bangsa, MAB. We also invite other companies that have routes in Jakarta and surrounding areas to switch to electric buses", he said.

Normally the Ministry of Transportation is to procure urban buses to be distributed to various regions in Indonesia. This will change with the procurement of electric buses, Bambang said. But facilities for bus operators from the private sector to procure buses will be provided, he added. ■

The World's Largest Service Market Competition Opens – VISTA Attracts Technicians Around the World



On September 30th registration opens for the world's largest and growing service market competition, VISTA, the Volvo International Service Training Awards. This year up to 20 000 technicians from Volvo Trucks and Volvo Buses global dealer network are expected to participate. Through teamwork and competence development VISTA aims to attract and maintain skilled technicians.

Even though VISTA is a competition, the main objectives are to encourage teamwork to build team spirit and pride, while also inspiring self-improvement and competence development. It's a way for service market personnel to increase both their knowledge and the quality of their work which, in the end, leads to improved customer service and greater customer satisfaction.

About VISTA

VISTA stands for Volvo International Service Training Awards, which started in 1957 and was originally a competition only for Volvo technicians in Sweden. 20 years later, by 1977 it had reached out across all continents, attracting authorized Volvo dealers from all over the world. Today VISTA is a biennial event and the biggest competition for service market personnel in the world.

VISTA is open to Volvo Trucks and Volvo Buses dealerships and their technicians worldwide. To qualify, participating teams need to complete two parts comprising theoretical and technical questions. ■

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