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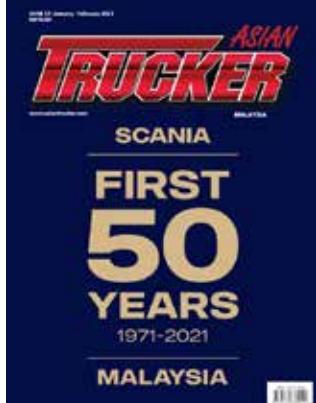
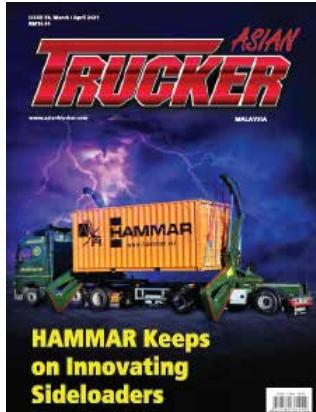
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Passing the Stress Test

The last 18 months have been a massive stress test for organisations and materials alike. The need to adapt overnight, while addressing the situation with new solutions or altered offerings, will have certainly shown many a business owner what cracks there are in ones strategy. According to some ex-president, the pandemic was to miraculously disappear last April. It did not. Month after month, the industry is further tested as to how much beating it can take.

A number of companies have ceased to exists and people have lost their jobs. As an integral part of the industry, Asian Trucker has reacted by offering free job listings on our website. If you want to make use of this, just get in touch. The fact that a number of brands are hiring shows that not only do these companies pass the stress test, but also that the economy is bouncing back.

I have covered a number of inspiring companies in this issue: Sendok is revealing their approach to the biggest challenge of our time while Mr DIY, Chemtrax, ICCL and Vertex Mission receive new trucks. Webasto is showing confidence in the market and is stepping into Malaysia by opening an office. Certainly, there are many more successes that can be

celebrated. Surely, many companies have demonstrated that they may not have anticipated a mega event like a pandemic to happen, but they adapted, adjusted and made do with the situation.

Addressing future needs, Fuso has given me the opportunity to meet with their designers. In our cover story I will be discussing how the OEM is seeing the future of transportation and what they vision is on how transportation could look like in the years to come. In this context, we also have Scania, Volvo and Hengst talking about their approaches to ensuring that they are sustainable in the sense of business continuity. Alternative fuels is one of hot trends all truck manufacturers are working on. Hengst has identified this as a big game changer and is reacting accordingly. Personally, I believe that the Diesel engine will be around for some time more as the switch to other sources of energy for transportation is yet another herculean challenge. I am having a closer look at Diesel engines and their history from back when Mr Diesel gave his patent to MAN to propel their first truck.

This time, I would also thank Daihatsu for making me take time out of my busy schedule by giving me two of their new Gran Max for test drives. Never shy of taking a challenge, I took them up on their comment that I could also do a video. It is our first video review of a vehicle while a complete evaluation is included in this issue of Asian Trucker. I am sure that the fun that was had while producing a in depth review of the vehicles shows in the report. I admit, it was a bit of a task to find suitable locations to take photos, although one would think that there are plenty of backdrops in Selangor.

As with any difficult time, there are also the fraudsters, the crooks and those that are prying on the ones that are vulnerable. In the transportation industry, counterfeiting and passing of marks are just some issues that companies face after having invested heavily into their intellectual property. One can understand how transporters may want to reduce cost, but when duped into buying sub-standard products, it can end up being a more costly option than one thought. Countering this, brands like Wabco go to great length to ensure that their product image is intact and that customers have options that may offer a lower-priced alternative, without compromising on quality.

This month, I shall give you a Ping Fu quote for inspiration: "Bamboo is flexible, bending with the wind but never breaking, capable of adapting to any circumstance. It suggests resilience, meaning that we have the ability to bounce back even from the most difficult times. . . . Your ability to thrive depends, in the end, on your attitude to your life circumstances."

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Stefan Pertz
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Isuzu Drives Mr D.I.Y Further with Delivery of New Trucks

The delivery marks 100 units of Isuzu trucks owned by the homegrown retail giant.

Isuzu Malaysia Sdn Bhd ("Isuzu") shared today that it had recently delivered eight units of medium-duty trucks from its Forward Series (F-Series) range to popular homegrown retail giant MR D.I.Y. Group (M) Berhad ("MR D.I.Y.").

The new trucks comprise six units of the Isuzu FSR90 model and two units of the Isuzu FVR300 model procured from Isuzu's authorized dealer, Ultra Gallant Sdn Bhd ("Ultra Gallant"), and will be used to further support MR DIY's nationwide expansion and its increased logistics needs.

A handover ceremony with a mock key presentation to mark the official delivery of the new Isuzu trucks was held recently at MR D.I.Y.'s headquarters in Seri Kembangan, Selangor, and attended by the senior management teams of Isuzu, MR D.I.Y. and Ultra Gallant.

Koji Nakamura, CEO of Isuzu Malaysia Sdn Bhd shared, "We are very pleased to have completed the delivery of eight units of Isuzu medium-duty FSR90 and FVR300 trucks to our esteemed customer, MR D.I.Y., and to

be able to continuously provide the support they require to operate their flourishing logistical assignments. We would like to thank MR D.I.Y. for the support and trust given to the Isuzu brand."

MR D.I.Y. purchased its first Isuzu truck in 2017 and has been steadily adding more units to its fleet over the last four years. With these additional eight units plus all the previously purchased and registered Isuzu commercial vehicles, MR D.I.Y. now owns a total of 100 units of Isuzu trucks in its fleet.

"As one of the largest Japanese truck manufacturers globally, it is our obligation to provide our customers with commercial vehicles that can lead the way forward for their business to achieve maximum efficiency and productivity," said Nakamura.

He added that both of the truck models are part of Isuzu's F-Series medium-duty commercial vehicles that the company has been producing for decades through continuous development of new trucking innovations, and where its customers

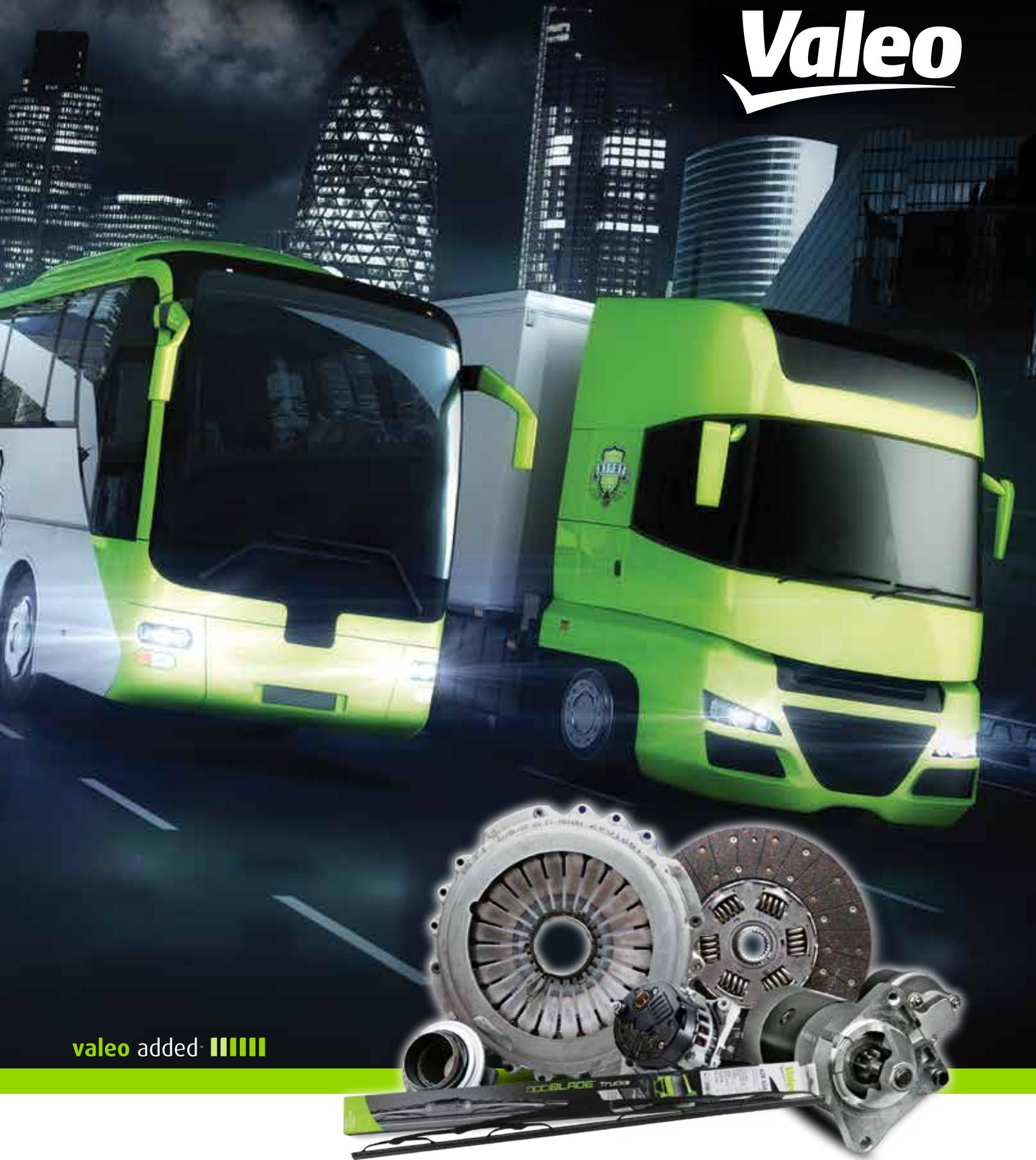
around the world embrace and count on for the advance features, innovative design, and dependable performance.

"Isuzu's F-Series range of commercial vehicles feature a choice of five powertrain for a range of performance and torque, optimized wheelbases for greater load capacity and body-mounting capability, offering the versatility today's businesses need to be successful," Nakamura added.

Commenting on the handover of the vehicles, a MR D.I.Y. spokesperson said, "We are on a strong growth trajectory, with 700 stores now, and plans to open 175 new stores across our three brands in 2021. The backbone of our growth is the efficient distribution of goods via our centrally-managed distribution system. Isuzu has been a valued long-standing partner who well understands our needs, and has been supportive in meeting them."

"The Isuzu FSR90 and FVR300 medium-duty trucks are the ideal, adaptable, and value-added choice for meeting the requirements of any transport assignment. With the gross vehicle weight of 11,900kg for FSR90 and 19,000kg for FVR300, we are confident the trucks will be able to provide high utilization with absolute productivity, reliability, and safety for the sustainability of MR D.I.Y.'s soaring business," said Nakamura. 

Valeo



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Vertex Mission Looks East for New Truck Purchase

Collecting their latest batch of prime movers, Vertex Mission's chief elaborated on the decision to opt for an oriental brand this time around to enhance their fleet.

Although in the same livery, the Vertex Mission trucks that were recently procured stand out among the other vehicles that we are used to see around Port Klang as they are from a different brand. This time around, Soo Chee Yeong, Managing Director, Vertex Mission Sdn Bhd has given Hino the nod for a substantial number of trucks to increase the total number of vehicles in his yard.

The five trucks, in 4x2 configuration, are a batch ordered after a test with two units has been carried out last year. Hino supported the test units with technical support, service and maintenance as well as driver training to ensure that the vehicles are operating at peak performance.

Vertex Mission found themselves in an interesting situation. "We argue that a fleet comprising of a single brand is easier to manage. First of all, one will have more negotiating power. Secondly, with a single brand, one reduces admin when it comes to spare parts management and other aspects." However, as a business leader, Soo also have satisfy the demands of the shareholders and thus find the most cost effective assets to be deployed.

Soo noticed that Hino, as a brand, is established in a number of industry segments. "However, we notice that hauliers seldom use Hino trucks. We would argue that there is no reason why the Hino 700 series cannot perform in our applications." Confidence in the product was boosted by the fact that Hino is part of the Toyota Group. In Thailand, the population of Hino trucks among hauliers is significantly bigger. "If this truck can be used in other countries or industries, why can't we use it?"

With the ambitious goal of having a total fleet of 100 trucks, the newly acquired trucks are to be added, offering extra capacity. Meanwhile, Vertex Mission is already in discussions for the purchase of the next batch of five trucks, which are likely to be delivered in Q3. "We might even increase the order to a ten," Soo said.

Atsushi Uchiyama, Managing Director, Hino Motor Sales Malaysia, took the opportunity to comment further. "Hino has been in Malaysia for a long time and we have made a name for ourselves in the light and medium

duty segments, now we also have the right product on offer for the heavy hauliers." He further revealed that the Hino 700 series has been a popular model in East Malaysia. According to him, many transporters prefer the 6x4 with lift axle, which Hino is also offering, along with automatic and manual transmissions as options. "Obviously, we are very confident that our products satisfy with the Hino QDR approach (Quality, Durability and Reliability)." For him, the support of customers is extremely important, which is supported by an in-house fleet management system and the Hino Total Support Centre.

Soo also shared observations that he has made. He detailed that in the past the industry relied heavily on European trucks, with a lot of them being reconditioned vehicles. "In recent years, more and more brands have been entering Malaysia. While that is a good trend overall, it is the service network that matters most, which is where many then fail. And Hino already has a network that is well established." Vertex Mission's will be driving short distances only, hence the way milage is affecting the value and duration of use of the vehicle has to be assessed differently than in countries where trucks are on true long haul operations. "If you are running a truck for a week non-stop, you are racking up kilometers very fast and within five years, the truck can be sold as scrap metal. Not so in our case. We need something that retains its value and readiness."



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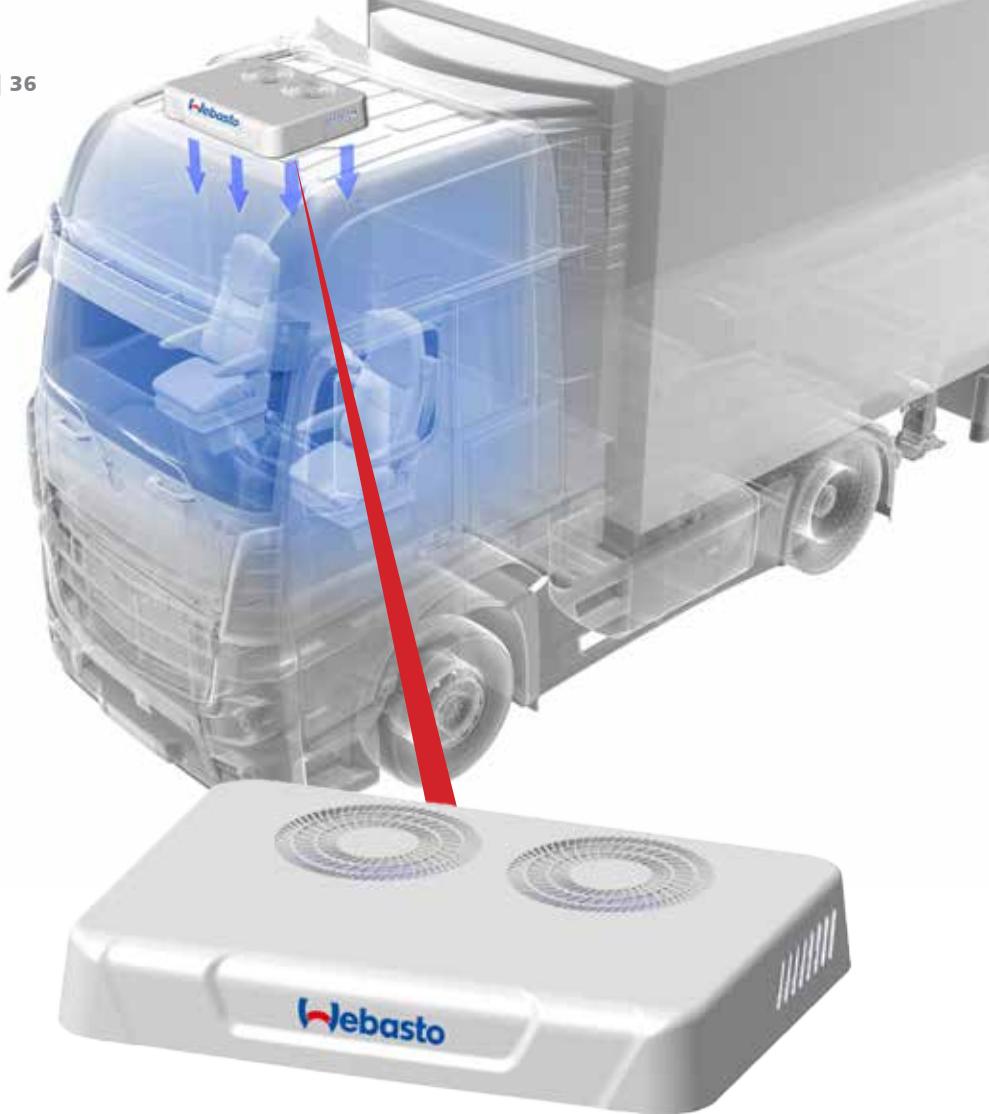
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Webasto Thermo & Comfort Announces South East Asia Staff Appointment

Webasto has been providing comfort solutions for the Bus and Truck Market since 1965 and have increased their Truck Portfolio in recent years with high quality products that are perfect for the Asian climate.

Mr David Byrne, Webasto Australia's Director of Sales, Service has announced the appointment of Mr Kamaljit Gill in the position of Technical Sales Manager, South East Asia. Mr Gill will be based in Malaysia to support Webasto's growth plans for Customised solutions across South East Asia in a range of segments including Battery and Charging, Bus and Truck Climate and Special Operations Vehicle solutions. In the coming months Webasto will be recruiting a Nationwide Dealer Network to support customers across the region.

Mr Gill has extensive experience in the Truck industry holding senior roles across a range of functions, including Quality, Technical, PDI, Operations and Sales, spanning 17 years with Mercedes Benz Commercial vehicles. Mr Gill's experience will be a welcome addition to the Webasto Thermo & Comfort Team.

Webasto have some exciting new additions to their product line up including the Cool Top RTE 23, an effective, lightweight, 24 volt, roof mounted electric parking cooler made specifically for the region. Another important addition is the highly efficient Medical Grade, HEPA-14 air filtration system designed to filter the air and protect from Covid-19 and other air borne infections in Ambulance cabins and in mass transport situations. These new products complement Webasto's existing truck market offerings such as the rear or roof mounted Cool Split 20 truck air conditioning system and a range of compressor fridges ranging in size and style from a 16L Drawer Fridge/Freezer up to a 49L Upright refrigerator. All Webasto Products come with a two year warranty.

There are exciting times ahead with Webasto preparing to support future electrification with scalable CV battery and thermal management systems for all manner of electric vehicles, Mr Gill will be an integral part of expanding this offering into the South East Asia market. 

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(from left) Mr. Marc Legeay, Chief Executive of Hap Seng Trucks Sdn Bhd (HST) with his team hand over the Actros Certification of Appreciation to Mr. Kevin Lim, Director of ICCL and his excellent team.

ICCL Keeps it Cool with Actros Trucks

Hap Seng Trucks Sdn Bhd (HST) represented by Chief Executive, Mr Marc Legeay were extremely proud to hand over 10 units of the 5th Generation Actros to the Director of Integrated Cold Chain Logistics Sdn Bhd (ICCL) Mr Kevin Lim at Penang recently.

The delivery of the trucks is the result of events that took place in 2020, when Legeay met up with Kevin Lim from ICCL during the Grand Opening of Hap Seng Trucks Prai branch and Regional Launch of new Actros. Lim was one of the first customers Legeay met since his arrival in Malaysia before taking over the position of Chief Executive at Hap Seng Trucks Distributions Sdn Bhd.

ICCL started in 2006 and today it has grown to a group of companies, which together form an integrated total logistics organisation which now operates a fleet of no less than 500 vehicles. The company offers a full range of logistics services with supply chain management expertise to manufacturers, distributors, food service providers and retailers all over Malaysia. "We operate a network of facilities, having both temperatures controlled, ambient environment, an extensive fleet of trucks and prime movers. ICCL are also the largest halal service provider of temperature-controlled distribution services in the country," Lim summed up the brand promise. Customers include reputable international food chains, international pharmaceutical and medical device brands, hypermarkets, FMCG products, personal care products, convenience store chain among others.

According to Lim, the success of ICCL is driven by the focus on vehicle Total Cost Ownership (TCO), where uptime, fuel consumption and productivity play major roles. He said that a good example is the monitoring of fuel consumption via Fleet Management System (FMS). It is installed in all ICCL trucks in order to analyse and optimize the vehicles fuel consumption. The fuel consumption data gathered from the existing fleet also served as the benchmark and key purchasing criteria for future ICCL trucks. Lim explained that ICCL operates several brands and models to fit into certain capabilities and projects. "We picked Actros specifically for our long-haul business." The batch of Actros trucks is to complement the existing fleet of trucks.

Legeay recounts that Lim was quickly impressed by the three core characteristics of new Actros which was crowned the International Truck Of The Year 2020. The Actros won this award for the 5th time since it was introduced to the world 25 years ago. The core characteristics of Actos include reliability, efficiency and comfort while Lim was particularly convinced by the high level of efficiency of the Actros. Starting with the aerodynamic cabin and efficient powertrain that is able to perform up to four percent better when it comes to fuel efficiency as well as the long service interval of 55 000km provide maximum uptime and fewer visits to the workshop. These advantages are proven to reduce the total cost ownership which Lim is looking for in ICCL's new fleet.

Supporting ICCL is the newly setup of Hap Seng Trucks Prai (HST), which is strategically located and provides comprehensive aftersales support with its strong team of certified technicians and administration. "High quality service is fundamental to our brand promise; "Trucks you can trust", is our motto," Legeay said. To this end, the technicians and service staff are equipped with the necessary skills and knowledge to deliver top performance every day. The new HST outlet provides a one stop solution focused on customer centric solutions from vehicles sales to after sales and spare parts. It was learned that this was also part of the evaluating criteria for ICCL. "The design of the new model, after sales service, reputation and past experience were determining factors for us," Lim stated.

The logistics centre of ICCL deserves a mention as it is not a conventional warehouse. It will be an Automated Storage and Retrieval System (AS/RS) facility, where no personnel is required for the operations of the storage and retrieval activities within the logistics centre. It will be the first of its kind in Malaysia, that is housed within a temperature-controlled environment.

The new logistics centre, an approximate 15 000 pallet space increase will bring ICCL's total capacity to 24 000 pallet positions upon its completion. With multiple temperature storage system, ICCL aims to become a regional distribution centre, able to offer comprehensive total cold chain logistics solutions, with value added services such as supply chain solutions, cross border services, repackaging, cross-docking, and VMI solutions.

"With this recent handover of vehicles to ICCL, HST Prai has established a strong foothold in the Northern Region and is committed to provide the best customer experience," Legeay stated in closing.



(from left) Mr. Marc Legeay, Chief Executive of Hap Seng Trucks Sdn Bhd (HST) hand over the mock key to Mr. Kevin Lim, Director of ICCL.



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Having the Scania NTG with ADR specifications is a plus-point for Chemtrax in assuring its clients safety for the deliveries. The drivers too are trained to the maximum in ADR certification that is in sync with safety features that the Scania trucks offer. Seen here is Hairul Anuar, Senior Manager Business Development, spot-checking with Bogdan Ciuta, QASSHE Executive, on the safety protocol before the Scania NTG leaves the yard to transport hazardous materials to customers.



"Business has been quite good, even throughout this unfortunate pandemic period due to our niche specialization. For now, we are certain that we may have to be prepared with more trucks to cater for the additional business that is on the cards. I guess it's all about being able to hold on to our present contracted customers with consistent impeccable service and ready to take on new ones, at a moment's notice," concluded Hairul Anuar, Senior Manager Business Development, Chemtrax Sdn Bhd.

Chemtrax Receives Their First Three Scania New Truck Generation

Johor Bahru— Chemtrax Sdn Bhd (Chemtrax) recently took delivery of the first three (3) Scania New Truck Generation. The keys to two units of the Scania New Truck Generation P410 A6X2NA and one unit of the P360 A4X2NA was handed over to Hairul Anuar, Senior Manager Business Development of Chemtrax, who is instrumental to the success of Chemtrax business.

Established in 1998 under the Sabaka Group Sdn Bhd, Chemtrax specialises in the transportation of hazardous materials involving chemicals and gas throughout Peninsular Malaysia, focusing mainly to the Klang Valley, and also specific materials used in nitrile gloves manufacturing in Malaysia and Singapore.

"This truck model is ideal for urban and regional operations and well-suited for our daily multiple loads into Singapore, and other demanding conditions," said Hairul Anuar, Senior Manager Business Development of Chemtrax.

The Scania New Truck Generation is tailored to withstand challenging surroundings, securing uptime and boosting productivity with tougher interiors, tougher exteriors and more power.

It is also designed and engineered to give Scania truck owners better fuel efficiency and lower CO₂ emissions as it is equipped with advanced powertrain and aerodynamic solutions that gives three percent fuel economy.

"The features of the New Truck Generation have improved greatly from the older generation making the truck more user-friendly with very comfortable adjustable seat that is close to the door, ergonomic dashboard and most importantly the large windscreens with extended view giving clear visibility from the different angles for our drivers making it easier for them to operate in a comfortable and safe environment," commented Hairul.

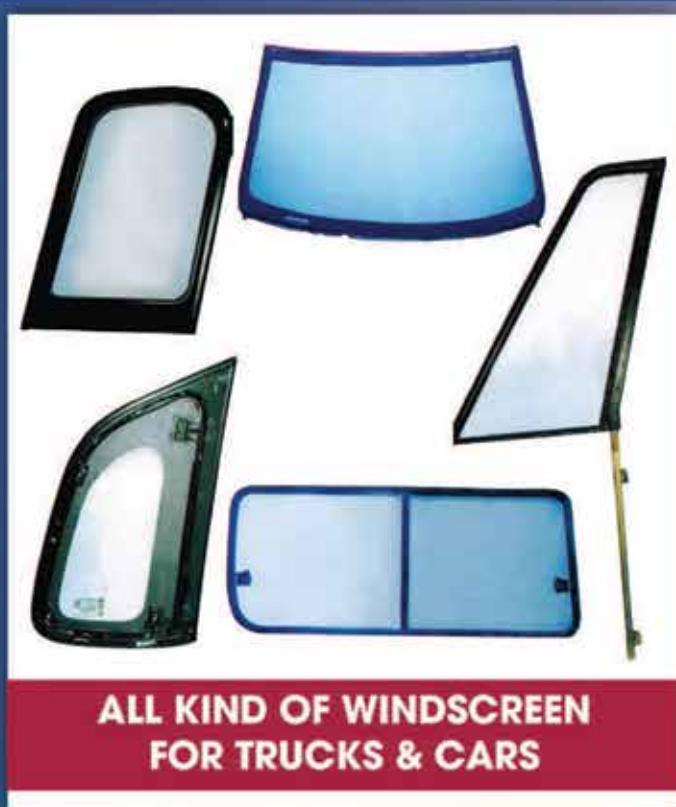
The Scania truck have proven to be the most fuel efficient among all the other brands in Chemtrax's fleet and conforms to the safety standards demanded by its customers. And even though the Pandemic is still at large, Chemtrax niche market in transporting hazardous materials to glove manufacturers have enabled it to secure its business sustainability via long-term contracts with its present customers.

Chemtrax currently operate branch offices/depots and yards in Pasir Gudang and Simpang Rengam, Johor and Kuantan, Pahang and plans are underway to open another operational office in Banting, Selangor in the first quarter of 2022. 



"The features of the New Truck Generation have improved greatly from the older generation making the truck more user-friendly and very comfortable. The adjustable seat that is close to the door, ergonomic dashboard and most importantly the large windscreens with extended view gives clear visibility from the different angles for our drivers making it easier for them to operate in a comfortable and safe environment," commented Hairul Anuar, Senior Manager, Business Development, Chemtrax Sdn Bhd.

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Nikola, IVECO, OGE to Accelerate Hydrogen Fueling



Nikola Corporation, IVECO and OGE announced that they have entered into a letter of intent for a collaboration to establish a business structure for transporting hydrogen via pipeline network from production sources to hydrogen fuelling stations in support of fuel-cell electric vehicles (FCEVs). The collaboration is being launched with the intent to further define and formalize the roles and responsibilities of the parties and the required collaboration governance to enable execution of objectives to be stated in definitive agreements.

IVECO, a brand of CNH Industrial N.V. and a pioneer in the commercialization and manufacture of vehicles powered by alternative fuels, and OGE, an owner and operator of a 12 000 km natural gas pipeline infrastructure network in Germany, will join Nikola, a leading designer and manufacturer of heavy-duty commercial battery-electric vehicles, FCEVs and energy infrastructure solutions, in advancing hydrogen infrastructure to enable progress and growth of FCEVs in alignment with European policy and industry needs. The primary focus of this collaboration is to further develop hydrogen fuelling solutions in Germany in support of the European commercial transportation system and to work with industry partners to install safe, reliable and cost-effective storage and fuelling locations for FCEVs.

The parties are committed to the development of a hydrogen economy and are focused on implementing the necessary refuelling and distribution infrastructure to deliver hydrogen to commercial truck owners safely, reliably and economically.

"Nikola is committed to delivering and advancing industry-leading hydrogen production, distribution and supply," said Nikola's President of Energy and Commercial Pablo Koziner. "We believe this collaboration, in particular, presents a very compelling long-term fuelling distribution solution that we expect to advance industry and overall market adoption of FCEV technologies."

"The ecosystem of transport will transform and current business models along the value chain will change with the introduction of hydrogen and battery-powered heavy-duty trucks," said Gerrit Marx, President Commercial & Specialty Vehicles, CNH Industrial. "Our collaboration is a great first step in starting up a growing platform of partnerships to make this a reality here in Europe, which requires entrepreneurial and non-linear thinking across fossil industrial structures."

"OGE is committed to establishing a pipeline infrastructure to transport hydrogen from production sources to critical exit points of distribution," said Dr Thomas Hüwener, OGE's Chief Technical Officer. "We are proud to play an essential role in enabling fuelling station development through our network capabilities and in working towards decarbonizing the economy."

ABOUT NIKOLA CORPORATION

Nikola Corporation is globally transforming the transportation industry. As a designer and manufacturer of zero-emission battery-electric and hydrogen-electric vehicles, electric vehicle drivetrains, vehicle components, energy storage systems, and hydrogen station infrastructure, Nikola is driven to revolutionize the economic and environmental impact of commerce as we know it today. Founded in 2015, Nikola Corporation is headquartered in Phoenix, Arizona.

ABOUT OGE

OGE is one of the leading transmission system operators in Europe. With a pipeline network measuring around 12 000 kilometres, the company transports gas throughout Germany. Due to its geographical position, OGE connects the gas flows in the European internal market. The company's 1 450 staff stand for security of supplies. OGE makes its network available to all market players in a non-discriminatory and transparent way, and in line with market requirements. The company shapes energy supplies, both today and within the energy mix of the future. 



Johor Sand & Granite Lorry Operators' Association Highlights Issues

The Pandemic has affected businesses in many ways. In a recently held dialogue session, Johor Sand & Granite Lorry Operators' Association highlighted some specific to this market segment.

A dialogue and discussion session, organized by JSPT (Jabatan Siasatan Penguatkuasaan Trafik) Contingent Johor, involved the enforcement agencies i.e., JPJ (Jabatan Pengangkutan Jalan) and PTG (Pejabat Tanah dan Galian) and four other associations involved the Johor State lorry operators and drivers was held at the Johor Police Contingent office.

The dialogue session on 25 April 2021 was chaired by YDH CP Dato' Ayob Khan Bin Mydin Pitchay, Ketua Polis Johor and attended YDH DCP Dato' Khaw Kok Chin, Timbalan Ketua Polis Johor, Political Secretary of Transport Minister (MOT) Mr Ling Tian Soon, Pengarah JPJ Johor and Pengarah PTG accompanied by their respective officers.

The main issues brought up and discussed in the session were among the following:



1. Inconsistencies and confusing enforcement action by various enforcing units
2. Inappropriate operation of tipping trailers with giant bucket has brought alarming safety concerns i.e. damaged road conditions and causing possibilities of road accidents.
3. The Association was seeking direction and clarification from the enforcement agencies on the rightful usage of the tipping trailers with giant bucket so that all operators are given clear direction on what to do and what not to do to avoid breaching the rules and regulations.

The Chairman had taken proactive actions to escalate the issues / concerns to JSPT, JPJ, PTG and MOT for further direction.

After the dialogue session, the Association had also presented a Memorandum to the Political Secretary of Transport Minister (MOT) Mr Ling Tian Soon to plead for extension of operating hour of BSI Custom at Tg Puteri. With the restricted operating hours from 7am to 7pm, many lorry drivers are forced to re-route via Tuas 2nd link to return to Malaysia which is much further and taking longer time. This has caused them to reach home late and having insufficient rest which directly impact their health condition. To make thing worse, they have to break fast ("buka puasa") in the lorry during the month of Ramadhan instead of joining their family at home. Some lorries with loaded goods are forced to stay overnight before the checkpoints if they missed the operating hours. All these have caused tremendous hike of operating cost to the operators in terms of fuel, toll fares and allowances, if any. TP



Thunder Express is on a Roll, the Steelbro Sidelifter is there to Support

Thundering into the haulage business, this operator uses Steelbro sidelifters to address the most pressing issues of their business: dependability and flexibility.



Located near Putrajaya, Thunder Express Sdn Bhd is deliberately located in the middle between the airport and Port Klang. With a background in logistics, the company initially focused on freight forwarding and the strategic placement of the office is a reflection of their business activity. Meeting with Calvin Wong and Joyce Sim, both Directors, we learn about how they managed to grow their business at lightning speed with the help of Steelbro's sidelifters. As clients demand for fast service, the company name is a depiction of the way things are handled: lightning fast.

Thunder Express was established in 2014. At first, it was Wong working alone after he set up the company. He started alone in a small rented office in USJ, initially just providing the freight booking services, which included air and sea freight. He realised that this was not enough and that clients were asking for a full suite of services. Just offering partial solutions was not enough for the demanding clients he attracted. "In order to diversify the service in logistics and meet the requirement of customers, we applied for a customs brokerage license in 2017; and set up our haulage department in 2019. So we basically can provide A to Z services to our clients," he summed up the company's resume till date.

As an integrated service provider, Thunder Express does not specialise on a certain type of client, but emphasises flexibility and dependability. "What we found is that many times, when we outsourced services, the third party let us down. Sometimes we would only find out days later that the goods had not been moved as promised." This kind of situation was not acceptable for Wong and he countered this risk of his name being tarnished by unreliable providers through vertical integration.



Prior to setting up the haulage department in 2019, serious research went into the planning. It was then, when Steelbro was added to the list of providers of assets. Reputation and dependability of Steelbro's sidelifters was confirmed by other users and members of associations. Thunder Express handles various types of cargo in standard 20' and 40' containers, and also ISO tanks. Many customers request for shunting service, due to limited numbers of loading bays at their warehouse. Making up around 40 percent of the jobs, this is a key service offered. "This is where a sidelifter really shines and the ability to quickly move containers without using expensive gear has put us into a very advantageous situation." Besides, for those premises who not have a loading bay, without sidelifter they will need to climb up the trailer for unstuffing. Has using the Steelbro sidelifter changed the operation and the types of work carried out? Yes it did, for example some of Thunder Express' customers had to hire crane trucks to unload the container from the trailer, whereby a sidelifter can replace the crane truck and perform the same job at their side.

"Sidelifter truck also helped us to perform the jobs faster when we need to focus to turn in / turn out a big volume of containers from one premise to another." Therefore providing sidelifter service will attract a wider customer base. The initial fleet of three prime movers and ten trailers, of which two were sidelifters has served Thunder Express well and the plan worked. Today, the fleet comprises of 11 trucks, 75 trailers and three Steelbro sidelifters. While the majority jobs are within the Klang Valley area, Thunder Express is able to operate throughout the peninsular. "Today, one of the main challenges we are facing is the congestion in ports globally. Being able to quickly move containers around using sidelifters is an advantage we have right now." Since the acquisition of the sidelifters, Thunder Express has sent the trailers several times for normal service and parts replacement. So far the service level has

been satisfactory according to Wong, whereby Steelbro managed to solve the issues in a timely manner, fast and accurate.

Drivers have to have at least two years' experience before they would be considered by Thunder Express. Feedback from operators thus far is that the quality of Steelbro unit is reliable and the operation is safe and easy to control. "Safety consideration is very important to us, with SB450 we can carry the containers up to 45 tonnes freely. Think about heavy duty load, think about Steelbro," added Sim. Durable and sustainable are terms used by the duo, reflecting their ambition for the business. Asked about future growth, Sim said that the company has still a lot of potential and more equipment, including Steelbro sidelifters will be added as and when demand supports this.

Sim, with a background in finance, is hoping to be able to repeat what she has been doing before joining her husbands' business: take the company public. When asked about the secret ingredient for the fast success, Wong jokingly said that one has to find a very helpful spouse. Obviously, this constellation seems to work as Sim is applying a very sharp pencil when it comes to helping customers saving money. In turn, customers see Thunder Express not as just a transporter, but a partner that brings knowledge and equipment to the yard to make transportation seamless and cost-effective. **T**



Sendok Makes the Most of the Situation

There are many possible ways to respond to a crisis. Sendok's teams took a look at how they can best continue to support their clients and the answers to the problems are insightful.



We spoke Loo Lian Khing to find out what the group has done to sustain and even grow the business. With the country shut down, one wonders how the limitations affected the transport industry. Loo explains "On the contrary, our industrial sector is categorized as essential service and therefore most of my customers continue their operation without interruption." The construction sector was slightly effected during MCO 1 but only for a short one month period which later resume operation. Sendok Group offers off-road trucks for such applications. "As such no vehicle was parked in the yard for long, but all running with lower load capacity. With lower capacity ,the maintenance of vehicles has in fact been reduced causing lower throughput at our various workshop."

What could be observed is that customers delayed their new vehicle purchases and this has caused Sendok's sales volume to drop by about 50 percent in 2020. However during the first quarter of 2021 there was a marked improvement in sales especially in the construction sector. "This has help us to clear most of our offroad and on road tippers and concrete mixers," Loo proudly reports.

Two factors made pricing of the trucks a major issue to tackle. Firstly, the upheaval in the shipping industry as a result of the pandemic has caused shipping to go topsy turvy. Shipping rates have quintupled for the main routes. Secondly, steel prices have increased from 80 sen per kilo to nearly RM1.80 per kilo. "This has posed a new challenge to our new stock arrival."

In response to these difficulties, Sendok Group has improvised certain measures to help customers during the MCO to ensure that their operation remains stable. For instance, Sendok Group was able to provide in-house

financing for good customers which were unable to get bank financing. "Our interest rate is also very fair and attractive. This is intended to help customers and therefore a high interest rate is not our priority," Loo said. Customers now have the option to convert to bank financing once they have obtain such facilities. In addition, trade-in of used vehicles was offered to ease the trouble for customer to look for buyers. As another alternative, a rental program with option to purchase was offered to customers who need vehicles for short-term operation.

"Anybody knows that it is crucial to keep a fleet operational and in tip-top working condition. To this end, we also initiated a few activities." Nobody likes to call a 24 hours breakdown service, but Sendok makes it easy as their hotline number sticker can now be found on all vehicle front windscreens to enable driver to call at time of need. Loo admits that this might not be a ground-breaking innovation, but in times like this it has helped to reduce stress for the drivers as they know that it will be easy to get help.

As movements were limited, consignments of spare parts at customers' places ensured that they will have fast moving parts handy. His clients reported that this has reduced downtime. Several fleet customers involved in construction projects received a special treatment: "We set up micro workshop near their place of operation. We have spare parts and mechanics permanently to service the customer until they completed their project." 





Naffa Sdn Bhd Builds Success with the Right Trucking Assets

Building a business requires not just a vision and long-term commitment but also having the right assets to support the growth of the business, especially so if it caters to a specific demand like for the provision of waste management services. For Kedah-based Naffa Sdn Bhd, the business of waste collection and management has been the cornerstone of the company since 1993 when it received its first cleaning contract and using the right trucks is pivotal for the growth of its business.

Founded by Mhd Isomudin Bin Md Yusoff in 1985, the business was started as Atal Syumul which later evolved and grew through several phases to become Naffa Sdn Bhd currently. Under the stewardship of Mhd Isomudin Bin Md Yusoff, the business also grew to own other registered and affiliated entities under the group. Some of the companies include Syumul Enterprise, Syumul I-Nur Sdn Bhd and Melati Asas Services Sdn Bhd, where all are involved in the waste management industry, serving government-linked and private companies in Kedah, Perlis and Penang.

"My company bought the first truck, which was a used truck, not long after obtaining our first waste management contract. And in 1998, I decided to buy our first Isuzu used truck after seeing many Isuzu trucks plying the roads in Thailand during my business trips there. Ever since then, I have continued to buy Isuzu trucks after experiencing how the trucks are very suitable and have supported my business tremendously," added Mhd Isomudin. He further shared about the reasons that led him to become a firm believer of the Isuzu truck brand, "I have continued to purchase Isuzu trucks over the years mainly because of the strong quality, durability, versatility and low maintenance of the trucks. In fact, my company Naffa Sdn Bhd has just recently bought an additional two new units of Isuzu FVR medium-duty trucks to further support our waste collection and management assignments."

In explaining about the machineries that are mounted on the Isuzu trucks, Mhd Isomudin shared that the water jetting is a process in which a high-pressure water hose with a sewer-jetting nozzle is pushed into the dirty pipeline. High-pressure water from the truck is then released through the nozzle to dislodge all of the dirt and waste. The vacuuming system then extracted all the solids and water which is then disposed into a sludge tank on the truck.

Currently, Mhd Isomudin owns about 30 units of Isuzu trucks which ranges from pick-up trucks to medium-duty trucks in his overall total fleet of about 50 trucks. "The Isuzu brand of trucks comprise more than half of the total trucks

my companies own and they were good investment for our business in terms of cost savings as maintenance is low thanks to the good quality of the vehicles. In our experience, we find that our Isuzu trucks have delivered better fuel savings and lower operational costs in terms of parts, uptime and income for my business as they are less susceptible to breakdowns," he said.

With the recent addition of new Isuzu medium-duty trucks, Mhd Isomudin also added that his business will be more capable in taking on additional contracts and completing the jobs quicker. "In our line of services, having the right and sufficient vehicles or machineries to carry out the jobs effectively is highly important. We run on schedule and on a daily basis covering not just Kedah but also Perlis and Penang where we have four trucks deployed there. Quality service from us and continuous trust from our customers are very important and we cannot compromise on those." Nonetheless, should any aftermarket support such as servicing is required at any time, he is pleased with the short distance of only three kilometers from his business location to Isuzu's dealership.

"The team at Isuzu dealership here and I have had a good long-standing relationship and I am very satisfied with the support that I have been receiving from them. Maintaining the uptime and productivity of our Isuzu trucks are extremely important in our line of business, thus having a consistently reliable aftermarket support is very vital. We look forward to using the new Isuzu medium-duty trucks as I am confident the trucks will be able to provide high utilisation and solid support for our business," concluded Mhd Isomudin. 



Electric Trucks can Support Solar and Wind Power. Here's why.

Battery electric vehicles (BEV) are already today an obvious part of our traffic environment, and battery driven trucks are gradually entering the scene for both short and regional haul purposes. As we progress, the most difficult task we must solve concerns heavy duty long haul commercial transports – carrying heavy loads over long distances. For this, fuel cell electric trucks using hydrogen are an excellent zero exhaust emission option. Lars Mårtensson, Innovation & Environmental Director, Volvo Trucks, shares some insights with us in this article addressing the current state of this development.

Battery electric trucks are already available in Europe for city distribution and waste handling, and the next step, sales of larger electric trucks for mid-range regional transports, has now started in the US and Europe. Fuel cell electric vehicles (FCEV) for long haul will follow.

There is a common misunderstanding that batteries and fuel cells compete with each other, but in fact it's the other way around. For truck transport, the technologies will co-exist as they complement each other, with fuel cells addressing the really long distances and batteries handling shorter.

It is therefore clear to us that a combination of battery electric trucks for regional haul and fuel cell electric trucks for long haul will be important electromobility solutions for achieving sustainable transports. And the answer to those questioning whether we need both technologies for e-mobility is a resounding "Yes".

The more important challenge, if we are going to meet long-term demands for sustainable transport using electric-battery and hydrogen-fuel cell solutions, is that both the electricity and hydrogen used must be green (fossil-free) and easily available – produced from renewable energy sources and accessible in high volumes.

Hydrogen can play a crucial role in supporting solar and wind power. A major challenge with green electricity from sources like solar panels and wind turbines is the lack of predictability. The wind doesn't always blow and the sun doesn't always shine, and windless or cloudy days mean lower productivity. Today, most solar or wind electricity has to be consumed at the same time as it is produced, with batteries offering storage of only small quantities.

However, by using renewable electricity to produce green hydrogen, it's not only possible to store the energy on a large scale, but it also allows production

of electricity without facing the challenges and limitations of grid capacity. In this way green hydrogen can positively boost the efficient, reliable growth of solar and wind power, and also help to balance electricity supply and demand. These are clearly major benefits and important missing pieces in the entire renewable electricity supply and demand puzzle.

The development of green hydrogen can also be stimulated by increased demand from manufacturing industries. As an example, Volvo Group is collaborating with the Swedish steel maker SSAB for production of vehicles made of fossil-free steel. Volvo will start manufacturing the first concept vehicles and machines with steel from SSAB using hydrogen already in 2021. The technology for sustainable transport is within reach.

So, when will fuel cell electric trucks be available? Volvo's objective is to start customer tests before 2025 and to be in serial production during the second half of this decade.

Today, much of the technology needed for more sustainable truck transport is within reach. Our challenge now is to put all the pieces of this dynamic puzzle together in the best way. Volvo is making progress every day – together with their customers – and we certainly have interesting and exciting times ahead of us. 



MIROS Pushes Ahead with Road Safety Agenda

It was a packed agenda during the WRRS Symposium 2021 (WRRS = Work Related Road Safety) hosted by Miros on the 6th of April, which is a reflection of the fact that the team is working tirelessly on seeking ways to improve road safety. Over the course of the day, many papers, programs and findings were presented, with these being the highlights:

Launch of WRRS OSH-C

The Work-Related Road Safety Occupational Safety and Health Coordinator (WRRS OSH-C) programme was launched specifically to address all occupational safety and health (OSH) issues for sectors related to road safety.

The programme is a collaborative effort undertaken by the Malaysian Institute of Road Safety Research (MIROS), Social Security Organisation (SOCSO) and the Department of Occupational Safety and Health (DOSH).

According to their joint statement, the WRRS OSH-C programme was introduced to produce trained individuals recognised by the DOSH to help employers practice OSH aspects, promote OSH culture at the workplace and reduce the risk of road accidents involving their workers.

Miros director-general Dr Khairil Anwar Abu Kassim said it was an initiative of the WRRSM (Work-Related Road Safety Management) Research Cluster developed by MIROS. "It is specifically for sectors that involve work-related road safety such as operators of commercial vehicles, public transport, emergency service, as well as road monitoring and maintenance."

"Based on Socso's statistics, the number of road accidents involving workers going to and returning from work as well as the use of vehicles while working had seen an increase of almost 80 percent over the past 10 years," Khairil Anwar said in the statement issued in conjunction with the Work-Related Road Safety Symposium 2021 held in Putrajaya today.

Commuting Accidents

Drivers of commercial vehicles had a special status during the lockdowns in 2020 and special attention was given to a phenomenon called "Commuting Accident." It describes accidents that occur while staff is on the way to or from work. As major causes for these accidents, fatigue and rushing to work were identified. Of these accidents, 76.9 percent involved motorcyclists (drivers of commercial vehicles getting to or back from the yard), with 80 percent of persons involved being male and 65 percent under the age of 40.

While the absolute number of accidents was reduced in 2020, due to driving restrictions, it was observed that e-hailing and p-hailing riders were at an increased risk. One issue identified is the fact that delivery drivers do not have to undergo compulsory defensive driving training. Also, the number of fatalities among riders handling food deliveries were higher as there have been more drivers deployed during the lockdown. The group of e- and p- hailing riders now requires special consideration as it can be expected that this business model will remain popular beyond the pandemic.

Fatigue as Safety Issue

One of the contributing factors to road accidents is fatigue. Long term studies have shown that increased workloads and mental stress are adding to fatigue in drivers of commercial vehicles. Contributing factors to increased mental workload are divided into driving related and non-driving related issues. For instance, the condition of roads or the handling of the vehicle have been identified as such factors.

Generally, fatigued driving is underreported and a problem that goes mostly unrecognised as a safety hazard. In a presentation by MyRest the issue of fatigued driving was highlighted as an issue that deserves the same attention as other safety issues: education, enforcement and engineering is needed to combat it.

It is important to point out that fatigue can have its roots in off-work causes as well as in work-related conditions. However, the effects of being fatigued can spill over from off-work situations, thus affecting drivers during their operating hours.





MR. MASASHI MATSUMOTO,
MANAGER, PRODUCTION DESIGN



Fuso Reveals its Design Essentials

Usually, we only see the finished product and will not be aware of just how much thinking and development goes into a truck. Fuso lets us have a glimpse into how a truck is designed and what guiding principles they apply to the process.

While automotive design is undoubtedly a well-known aspect of passenger car production and sales, its significance for commercial vehicles has long been overlooked. The product development process at Mitsubishi Fuso Truck and Bus Corporation (MFTBC/Mitsubishi Fuso), one of Asia's leading commercial vehicle manufacturers, has been quietly shifting industry conventions by incorporating a heavy emphasis on design. Product design for the FUSO brand reaches beyond the pursuit of appearances, marrying form and function to deliver advanced comfort and safety while minimizing environmental impact. At the Design Essentials event held on April 14 at its Kawasaki headquarters, Mitsubishi Fuso showcased its pursuit of a clear identity, simplification, and perceived quality through each stage of its design process for products that serve society's needs, today and beyond. Through demonstrations of its physical design, production design, and advanced design, visitors were invited to discover why, in this age of economy, Mitsubishi Fuso remains committed to perfecting the art of the commercial vehicle.



BENOIT TALLEC, HEAD OF PRODUCT DESIGN FOR
MITSUBISHI FUSO AND DAIMLER TRUCKS ASIA

The best of both worlds

Design at Mitsubishi Fuso is situated within a global Daimler network, which allows the team in Kawasaki to mutually exchange ideas with more than 700 counterparts worldwide. Representing this exchange are Gorden Wagener, Chief Design Officer of Daimler AG, Benoit Tallec, the Head of Product Design at MFTBC and Daimler Trucks Asia, and an international, multi-generational team. The cross-border



Guiding principles essential to FUSO design

In order to keep FUSO's heritage intact while employing future-forward approaches to design, Mitsubishi Fuso designers have operated with three distinct principles as their driving force.

A clear identity

The first of these is establishing a clear identity and harmonious connection among all FUSO products. Here, "clear" indicates both a purity and cleanliness in form, as well as design that is immediately recognizable. Mitsubishi Fuso unifies the look of the front face through its entire family of trucks and buses, referring to the same motifs and design vocabulary across the range. At the same time, traits from iconic FUSO vehicles of the past fully resonate in the current family look. Each distinct model, however, accentuates a different aspect of this shared vocabulary, leading to individuality within uniformity. The face of the Aero Queen coach bus, for instance, contains plenty of elements that correspond to the face of the Canter, but also emotes a stronger sense of elegance and calm compared to its more agile sibling.

setup has enabled design at Mitsubishi Fuso to integrate global expertise and world-leading technology while safeguarding the uniqueness of FUSO trucks and buses within the Daimler Trucks line-up. The result is a product range that is at once a continuation of FUSO's heritage as a stalwart of Japanese "monozukuri," while also an interpretation of the forward-looking forms and precision foundational to Daimler vehicles.

The design department of MFTBC is split into three teams: Advanced Design, Production Design and Physical Design. The team responsible for concepts and future models is the Advanced Design team. "It is this group that is shaping the brand, looking into the future," Satoshi Tsuchide, Manager, Advanced Design said. Production design balances product experience, performance, and cost while Physical Design is responsible for modelling, the creation of clay models, scale models or hard models of trucks that are to be introduced into the line-up.

MR. SATOSHI TSUCHIDE,
MANAGER, ADVANCE DESIGN





Facial continuity is therefore maintained throughout the line, while different characteristics are emphasized in each model according to their purpose and use case.

Simplification

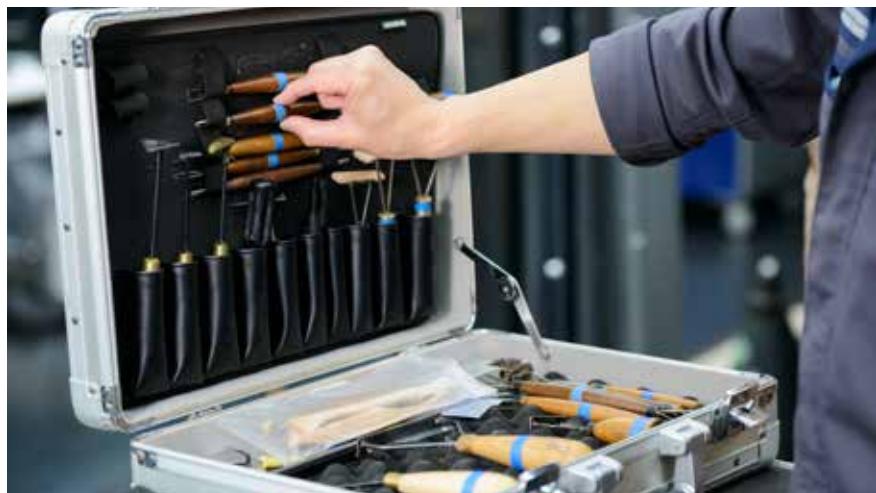
Another principle driving design decisions at Mitsubishi Fuso is the search for simplification. The pursuit of the simple means more than omitting the superfluous; it means FUSO designers are constantly problem solving to address as many needs as possible in one fell swoop. Purely decorative gestures are eschewed for the simplest solutions that can marry form and function, with neither preceding the other. The roundness of a lamp, or the curvature on the side of the cab – all aspects of the vehicle are decided in a way that fulfils a variety of requirements at once. For example, production efficiency, aerodynamics, and structural balance are among the many considerations contributing to the integration of components seen on the latest Canter face.

Perceived quality

First impressions count, and designers at Mitsubishi Fuso step up to the challenge of making them perfect. The strengths and functions of a vehicle, as well as the care taken to produce it, should be immediately visible when it comes to a FUSO product. Work at the Kawasaki Design Center also reflects the awareness that trucks and buses are a constant presence on roads everywhere. This means

that in the eyes of the designer, each product is a brand ambassador, not only for FUSO, but for customers as well. The aesthetic considerations invested in FUSO vehicles are intended to live up to and reflect the pride that drivers and logistics providers take in their role in the world.

Guided by the brand's principle of simplification, these futuristic designs are expressions of it. Design, according to MFTBC has to lead to perceived product quality and a clear identity. This, in the case of FUSO vehicles is achieved by applying the "Black Belt motif". Given the rise of modern technology, paired with the availability of different means of propulsion, the task put before the designer is to make the vehicle easy to understand for the user. It is the message that needs to be simple. Today, the Black Belt is integrated into the physical appearance of the vehicles, however it serves more than just the purpose of identifying the brand: it is a component that holds the logo or houses sensors, it is part of the face of the vehicle, holding the lighting system. Simplification does not mean the absence of technology or integration of the latest thinking, but the ability to convey that there has been substantial thinking applied for a better user comfort. Both, trucks and buses must be developed with authenticity in mind, not simply focusing on meeting a current trend.





The three principles are applied rigorously through every step of design process, from physical modelling, production design, and even in the ideation of concept vehicles in advanced design work. Presentations at the Design Essentials event delved further into how they are fully integrated into these key contribution areas.

The starting point is a design proposal, which will then be presented and discussed with colleagues in engineering. At this point, aerodynamics is being considered. Finally, the mass production proposal is developed and presented. Masashi Matsumoto, Manager, Production Design, explained that the notion of keeping the production design close to what the initial concept was is very important. "What our clients expect is agility, dependability and fuel efficiency. Our styling is to convey this message to the people that buy our vehicle," he elaborated. Using the example of a sports car, the idea of speed and handling is conveyed by the shape of the vehicle. When we think of speed, aggressive looking supercars come to mind. In contrast, a hybrid car that is to have great fuel efficiency is displaying a different shape and surface. The same would be true for commercial vehicles. A proposal is evaluated by objectively judging if the shape and surface would convey the purpose of the design. "A special purpose vehicle meant to be used as a rescue vehicle will have a boxy shape and may not be the most fuel efficient, but can carry a lot of equipment. Like our Athena."

Physical Design

The physical design process at Mitsubishi Fuso relies upon traditional Japanese craftsmanship in clay modelling, as well as more recent technology such as data modelling, 3D printing, and NC (numerically controlled) machine milling. Once given a drawing from their colleagues, clay modelers will begin shaping their real-world interpretation of the paper concept. Clay modelling for FUSO products is built on a trial-



and-error process with active dialogue between the designer and modeler, repeated until the designer and modeler arrive at a shared ideal. The transition from drawing to clay is not completed in one step. The design team also implements even more minute adjustments to perfect the work done by hand, to ensure production-ready quality. The result of their physical modelling is translated into data through a scanning device in preparation for digital fine-tuning. The latest technologies in 3D printing and NC machine milling come into play when higher levels of precision are required for more intricately designed sections such as the grill or the FUSO three-diamond logo.

Behind this time-consuming yet all-important facet of design work at Mitsubishi Fuso is not only the pursuit of quality, but the correct expression of character. The criteria for a design is seldom verbalized outside of technical specifications, but there is always a balance that modelers and designers have learned to recognize in a satisfactory piece of work. Clay modelers at Mitsubishi Fuso have always strived to achieve purity in proportion, as well as "FUSO-ness" in their work.

FUSO vehicles can be easily identified by their clean and fluid surfaces, standing in contrast to the rugged and geometric lines commonly seen in the world of commercial vehicles. Balanced proportions, gentleness, and elegance are major criteria that clay modelers try to achieve in their work, in order to imbue FUSO trucks with a sense of familiarity and naturalness when placed in an urban landscape.

Supporting this search for the ideal form is a strong foundation of collective experience and historical knowledge of the FUSO brand. At Mitsubishi Fuso, some clay modelers have developed their skills through careers in the field spanning over 30 years. These experts working at Kawasaki have been in their positions for several decades, gaining unparalleled knowledge of the process and an innate sense for what FUSO vehicles stand for. Mitsubishi Fuso relies on these veterans as the work of the clay modeler is something that cannot be easily taught, nor something that can be easily managed by sheer talent.

Clay modelers at Mitsubishi Fuso are also unique in their knowledge of, and involvement in multiple aspects of the design process. Each modeler has skills beyond shaping clay, including metal working and vehicle painting, which then feed back into the clay modelling process. For example, a clay modeler can apply their skills in metal working to build their own carving tools. Additionally, one individual is tasked not only with clay modelling, but also the other stages of the physical design process such as hard modelling and data creation. The depth and scope of the expertise held by the FUSO clay modelers further supports their uniqueness as true "takumi," in contrast to the hyper-efficient specialization that is the trend in manufacturing.

FUSO modelers' attention to detail and commitment to expressing the brand's essence in their designs differentiates their work from the digital-only design processes of many competitors. The attention of these master craftsmen, or "takumi," to even the smallest of details reflects Mitsubishi Fuso's understanding that commercial vehicle design is not simply about aesthetic value, but maximizing the value of trucks and buses for customers. Compared to passenger cars, trucks and buses have more rigid parameters they must clear in order to be considered for sale, such as load capacity, dimensions, and wheel base. There is a comparatively limited space in which the design team can

exercise its abilities. But taken another way, the differentiation Mitsubishi Fuso can offer within this limited space makes all the difference. Each decision taken by the clay modelers reflects their commitment to perceived quality and the optimization of every aspect of the commercial vehicle.

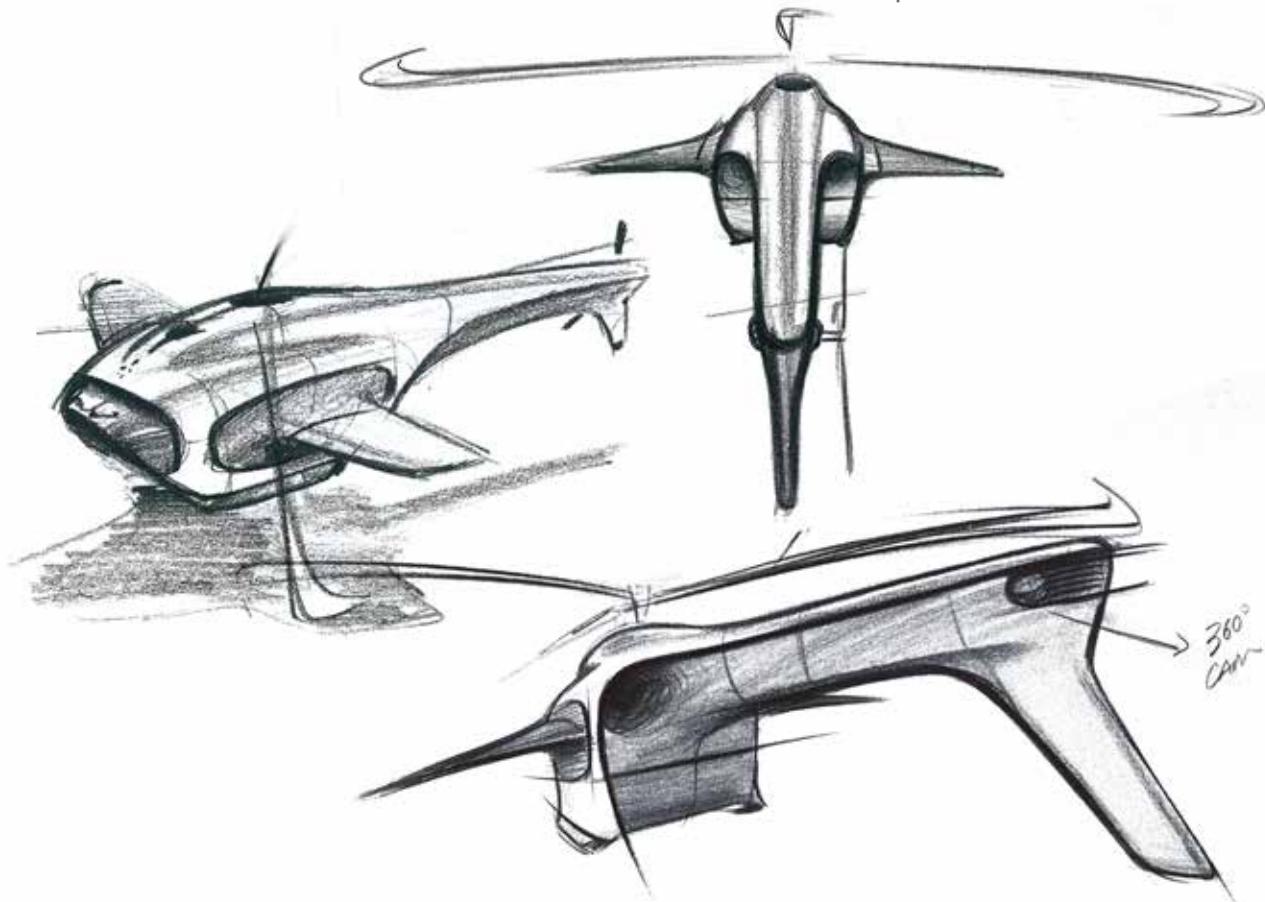
Production Design

Mitsubishi Fuso design is always about form and function, pleasing eye and mind. It is about beauty, ease and harmony (Wa), as well as the creation of driving comfort, safety, efficiency and economy. The latest model of the light-duty truck Canter, which was showcased at this event, features a cab design that was renewed for the first time in 10 years with the Black Belt design motif. With this new motif, FUSO designers breathed new life into the Canter's speedy and light character positioning within the product range. Touches of modernity and solidity were part of this reinterpretation, through which the Canter has evolved into a sophisticated leading face of the current truck scene.

The value of the Black Belt design motif is not only limited to exterior design, but also extends its benefits to the vehicle assembly process to improve the superiority of FUSO products. With the adoption of the Black Belt design motif in the Canter, the structure of the front grill now enables greater efficiency in the vehicle assembly process while creating a sleeker, unified look.

This aspect of Production Design, and the implementation of the Black Belt motif, also applies to the common LED headlight. The common headlight design, which is used in the Canter, Aero Ace/Queen and Rosa, supports a more efficient development process for each vehicle. In addition, by introducing the common headlamp, it became possible to reduce the number of parts from three to two, comprising of only the lamp and the garnish. The integrated headlight design therefore contributes not only to a more efficient development of the entire vehicle, but also to the reduction of total development costs.





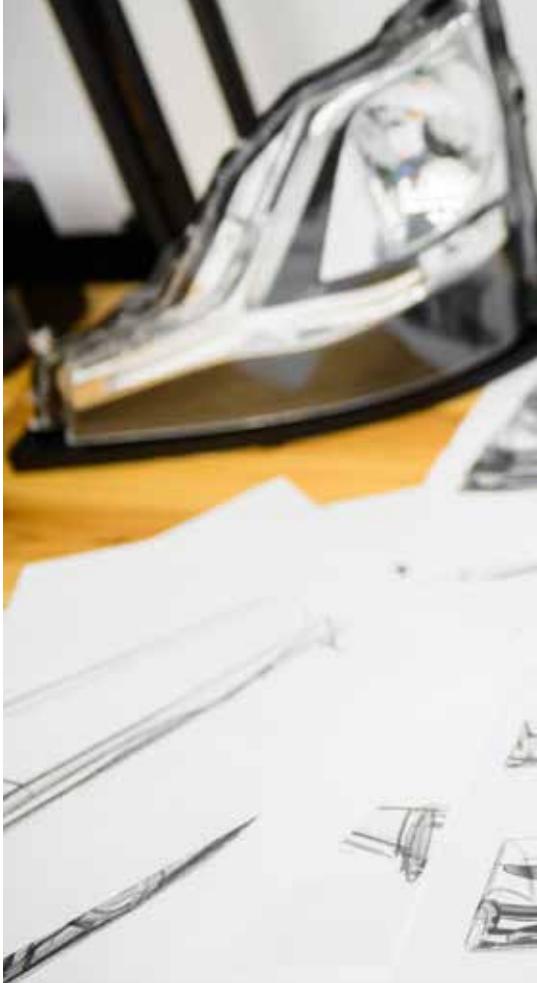
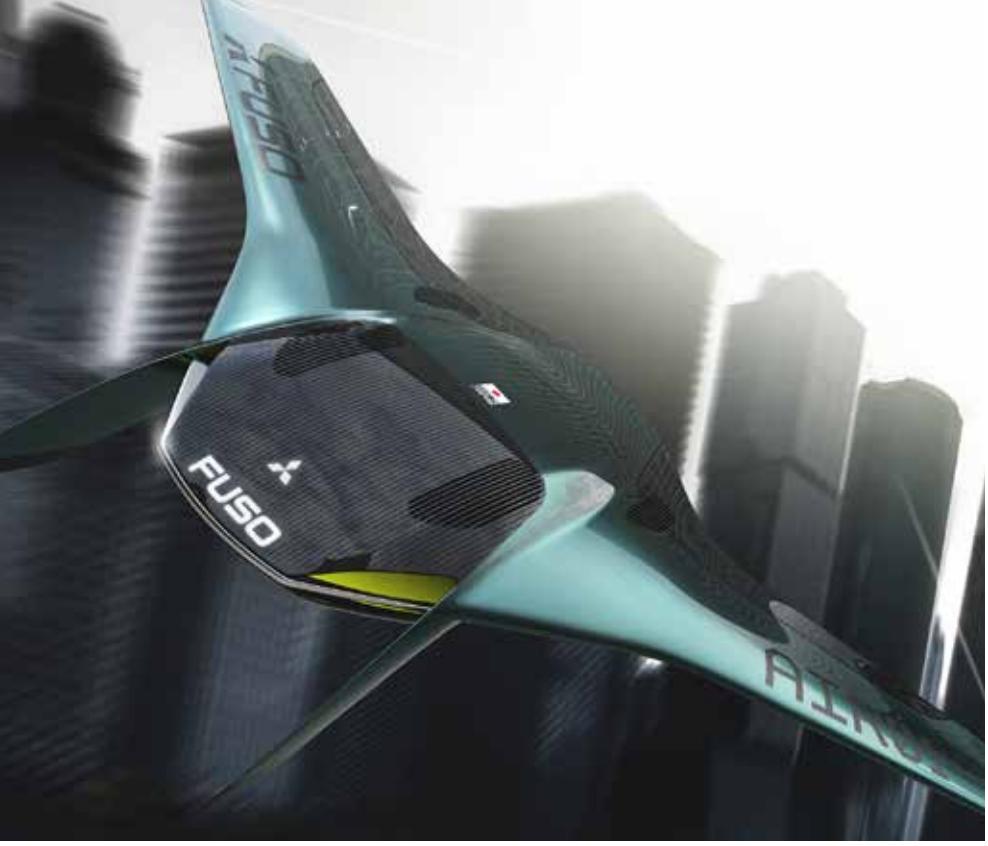
In addition, the Black Belt design motif, which was also introduced with the model year 2019 coach bus "Aero Queen/Ace" and model year 2018 microbus "Rosa," provides FUSO products with an immediately recognizable identity, bolstering the brand's overall visibility within the commercial vehicles industry. Even with changes to exterior colouring or additions of customer liveries, the FUSO brand name and its unique design elements remain clearly recognizable. The importance of Production Design is therefore two-fold: it supports a common family appearance within the FUSO product line-up, but it also means significant time and cost benefits for Mitsubishi Fuso as well as customers.

Starting off with the horizontal movement, the brand message is integrated into new designs. Stability is crucial and as designers, the team is aiming to constantly improving this. Considering the fact that FUSO is part of a bigger family under Daimler, the entire range should speak the same design language, which then also reflects being part of Daimler Trucks & Buses. The vertical movement is then based on the use of the vehicle. For example, the cabin of a truck is seen as the workstation of the driver and should therefore be as comfortable as possible. The engine size and drive train are determined by the load that a truck is moving. Heavy loads mean big spaces. Medium duty trucks need agility. Therefore, the design needs to be sophisticated in the sense that it has to fit the purpose. It is the "Black Belt" that allows for flexibility and adaptability. Mr Masashi Matsumoto, Manager, Production Design, offers an explanation as to how this Black Belt is applied: "It doesn't matter what the person wearing a black belt in martial arts is wearing. Tall or small, the proportions

change, but the black belt signify that this person is an expert in martial arts." By applying this Black Belt design motif, the user will immediately understand the thinking behind it. Whatever the purpose of the vehicle, Matsumoto said that the ultimate goal is to give "Some wow factor to the market, ensuring that the brand is distinctively different from the competition."

Production Design also enhances the quality of all FUSO products by taking advantage of 3D surface data in the design development process for the front mask. By leveraging the technology of 3D surface modelling, FUSO designers can easily explore how vehicles will appear with fewer creases and folds, how the wind noise will be impacted, and even how assembly on the factory line will be ordered. The design team will always seek to connect all of these elements smoothly to produce a product with unified intention and superior aerodynamics. This is another way in which the simplification principle manifests in the design process at Mitsubishi Fuso; 3D surface modelling achieves several optimization goals at once. It contributes not only to beautiful exteriors, but also to better aerodynamics, efficient assembly orders, as well as the strength and durability of parts.

One may wonder how the scale models are made as they look like they use high tech materials, for example rubber compounds for tyres. The first scale models which are created after the ideation stage are produced with industrial clay. When more intricate sections of the design, like the grille, need to be reproduced, 3D printing and milling machines are used to shape a plastic known as chemical wood.



Colour, materials and finish also play an important role in Production Design at Mitsubishi Fuso. These aspects of vehicle interior design directly impact the aesthetic appeal of the final product, but also enhance a vehicle's functionality for drivers. The interior of the "Rosa" exhibited at the Design Essentials event provides a sophisticated and luxurious feeling through choice of colour and material. At the same time, designers made sure to distinguish the texture selection for various switches within the cockpit, boosting the intuitive usability of vehicle. Production Design therefore reaches beyond appearance for appearance's sake, but aims to achieve better comfort for the driver, and better efficiency, both in on the manufacturing line and in on-road use.

Advanced Design

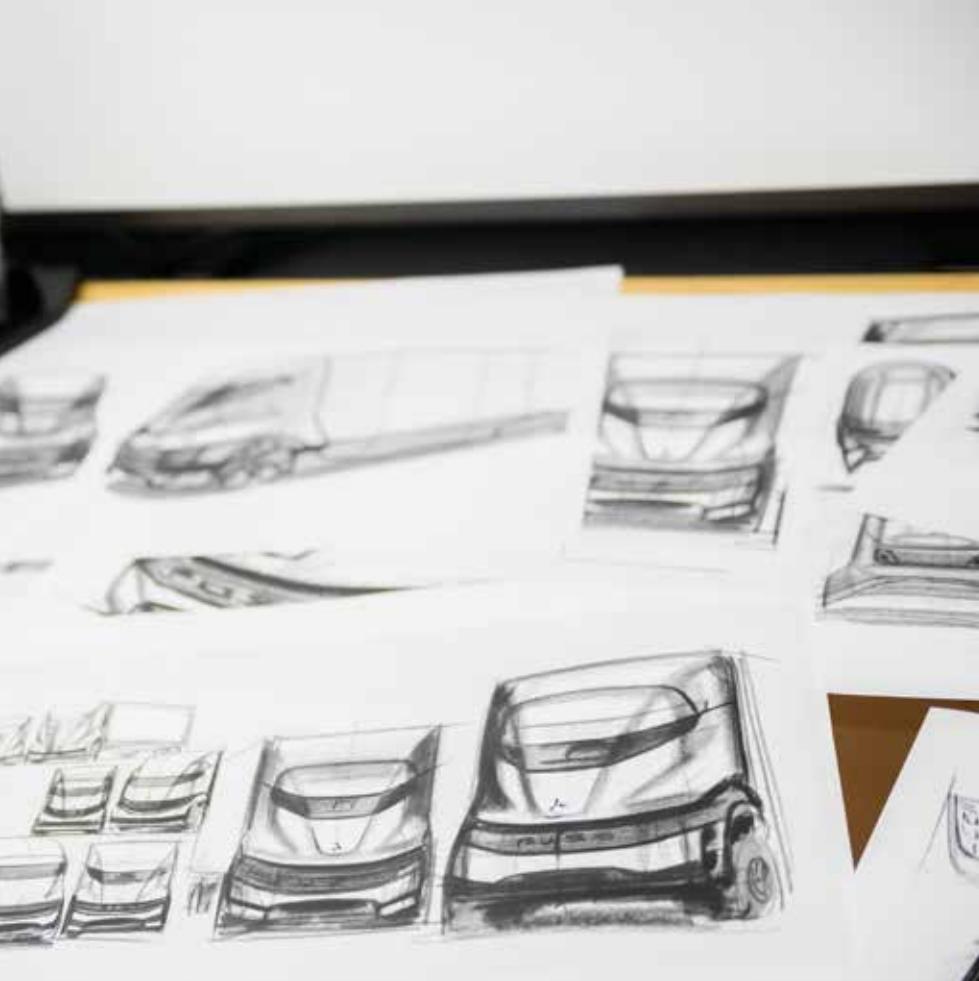
The shift to zero emission trucks and busses, as well as digitization, automation and the needs of an aging society, open up completely new dimensions for Mitsubishi Fuso Design. At Mitsubishi Fuso, we have a professional team dedicated to 'Advanced Design,' which tries to meld expected technical developments with predicted social trends and needs. These designers are currently envisioning the world in which we will be living in 2040. Their role is to shift boundaries and prepare Mitsubishi Fuso and the surrounding society for what the future will bring. Furthermore, certain aspects of Advanced Design also flow back into Mitsubishi Fuso's current series of products.

At the Design Essentials event, Mitsubishi Fuso exhibited its recent concepts for emergency vehicles, including future forms of drones. With these vehicles, Mitsubishi Fuso aims to explore further optimizations of natural disaster response in societies like Japan, while also examining possible future forms of fully autonomous trucks.

Additionally, visitors were invited to experience the 'virtual design studio', which has recently been established to make full use of cutting-edge virtual reality (VR) technologies and encourage collaboration among global Daimler colleagues. This 'virtual design studio' plays an important role in a post-covid world. With safety a top priority within Mitsubishi Fuso, this technology has helped the Design team stay on track of projects without sacrificing employee health. Through their VR platform, employees based in Germany, Japan, the United States, and India are working together simultaneously on projects in the pipeline.

As one can imagine, the development of a new vehicle requires creativity, but it is also restricted by laws, rules and regulations that the design team will have to consider. Such constraints are being prepared and provided by the engineering teams before Tsuchide and his team get started. "However, we have a certain understanding about how these restrictions are impacting our work. For instance, we need to be knowledgeable in assembly technology and how production works," he said. As such, team members learn as they go along. Tsuchide himself has over 20 years of experience in designing commercial vehicles and he started out handling one task at a time: tasks that he could carry out by himself, slowly gaining experience and knowledge over the years. Over the years, this on the job training, will equip the designers with skills and techniques needed. This accumulated knowledge will also be captured and those ideas that may not be used today will be archived and might find their way back into other designs later on.

"These recent concept models that we have developed in the Advanced Design department are expressions of



Being at the forefront of development, commercial vehicle designers have to bring passion to the job. "When you ask me, you have to be very passionate, a truck lover, to be in this line of business," Tsuchide said. One thing that many do not consider is that commercial vehicles are part of the landscape or urbanscape, as they are huge objects that are placed into the environment. Matsumoto added that the design of a truck requires a lot of imagination as the task is to develop assets that customers use in order to make money. "I want them to understand that a commercial vehicle is not something trendy, but something that has to deliver performance day after day, year after year." A slight change that may save one percent in cost may make a huge difference for a client that depends on a vehicle for many years. Matsumoto points out that the real challenge is to develop something that is performing after it has left the assembly line.

Exhibited Vehicles:

*All the exhibited vehicles are concept models. This does not describe any development plans.

- **The modular I.RQ (Intelligent. Rescue Truck)**

The I.RQ is an emergency vehicle energized by a fuel-cell drive. Its design is inspired by the current highfloored 4WD variation of the light-duty Canter truck. The highfloored 4WD achieves a unique position within the commercial vehicles market with its unmatched performance over rough terrain. The I.RQ takes these strengths and builds on them further with an autonomous driving feature, so that it can safely conduct rescue activities in difficult situations such as snowy or mountainous areas.

The connection between the body and chassis has been developed for modularity, allowing for the body to be exchanged depending on scenario and purposes. This means that a single vehicle is able to respond to a variety of situations and environments. For example, while a natural disaster may initially require a tipper truck to carry away debris from a blocked road, the tipper could also be exchanged for a simple van body later in the same day to deliver food and clothes to evacuees.



"how we envision the future of transportation," Tsuchide explains. The notion is to detach oneself from the idea that a commercial vehicle could only be road-going construct. What the designers addressed was the question of what they think future means of transportation could be, not only on the road, but also in the sky. He added that MFTBC may never produce drones, but this is an indication of how they envision the future. For production models however, the challenge is to ensure that a FUSO vehicle can be clearly identified as such. For concepts and studies this might be easy, whereas this is not so easy for production models as all truck makers are subject to the same legislation. "It is our job to ensure that our brand identity has an optimal amount of visibility."



MR. MASAKI TAKASHIRO, MANAGER, PHYSICAL DESIGN

With these features, the I.RQ proposes a means of increasing the efficiency and effectiveness of future emergency vehicles. It can act alone, or connect with several other vehicles on coordinated missions.

Furthermore, each I.RQ is envisioned to be equipped with an automated HeliDroid, which can precede the I.RQ to deliver first aid kits to victims and conduct primary surveys in particularly challenging conditions.

• The HeliDroid

The HeliDroid is presented as one possible future vision for a transport drone.

In line with the Daimler Truck purpose statement, "For all who keep the world moving," Mitsubishi Fuso constantly remains open to considering any possible forms of transportation. Designers at the Kawasaki Design Center already have in their vision a future where commercial vehicles will no longer only drive on roads, but also fly in the air. HeliDroid is our suggestion to this possibility.

Although the HeliDroid has been designed with rescue scenario in mind, it can of course be help in other situations. In combination with the lateral, on-road movement covered by existing vehicles, the HeliDroid can provide better mobility solutions to address needs that can only be solved with vertical transportation. For example, it could potentially reduce driver workload during urban deliveries, with its



ability to easily cover the distance from a vehicle on the ground to an upper level of a high-rise condominium.

The HeliDroid delivers objects by carrying them in a compartment under its body. It flies autonomously and possesses a digital personality to interactively communicate with the individuals operating it, or those being aided.

The Advanced Design team also has followed its pursuit of simplification in the design of the HeliDroid. With the integration of commonly exposed parts into one solid surface, not only does the vehicle look more unified, it also delivers higher energy efficiency and user safety.

• The flying Manta

The Manta is another concept for the future of the drone. Simplification comes up here again, as a core guiding principle of FUSO design. As the components of industrial products such as vehicles approach higher levels of integration, the overall shape of the product usually tends to become simpler and more spherical. This is oftentimes a reflection of technological advancements overtime, with the smartphone and the airplane providing just a few examples of the common trend. The form of the Manta presented at the Design Essentials event is almost a physical representation of this impulse towards simplicity. The highly integrated shape of the Manta achieves more than a futuristic look, however – its smooth surfaces also serve to support higher transportation efficiency and better user safety during its flights.

Virtual Design Studio

In addition to utilizing virtual reality (VR) technology in our daily design activities, Mitsubishi Fuso has recently established a virtual design studio to support the international exchange required in key projects. As part of the global Daimler Trucks network, those in Kawasaki have many opportunities to collaborate with colleagues overseas, such as in



Germany, United States, and India, regardless of nationalities or time differences. With VR glasses and controllers, Daimler Trucks designers can step into the same virtual studio beyond borders. Contributors from various regions around the world are then able to see the images and models from the same angle, leading to more productive discussions and faster decision making. This method of online collaboration has become increasingly appropriate in a post-covid world where travel is both less feasible and needed.

In the virtual design studio, designers can also see how vehicles run in different environments, and estimate how their creations interact with their surroundings. Vehicles often operate in more than one type of setting. In addition to cities, they may go through mountains, along the coast, or even through deserts. In our virtual design studio, designers can place potential vehicles within various programmed conditions to account for this diversity of use case. With aid of these technologies, the virtual design studio aims to provide the world with the trucks and buses that serve society in the most seamless manner possible. Another key fact of the virtual design

studio is that it enables designers to investigate the interior and exterior of vehicles more efficiently. Until now, designers had only been able to study either the vehicle exterior or interior at any one time, and explore the impact of decisions on those two aspects independently. In a VR world, however, designers can break any part of a vehicle to see inside. Choices for the interior, such as colour and material selections, can be exchanged and reviewed almost instantaneously. To repair the deconstructed design, they simply need to click a mouse once or twice, allowing considerable accelerations in the overall product development process.

Considering the technical constraints, the laws one needs to adhere too and other design challenges, Matsumoto opined that the biggest pleasure in the life of a commercial vehicle designer is when the last pieces fall into place and when, despite all the headwind, the design concept finally makes it into production and onto the road.

Why does Mitsubishi Fuso invest in Design?

Tsuchide described how his inspiration is derived from past developments and the idea of being honest to the customer. His efforts are supported by the fact that MFTBC is part of a global network where the quality aspect is crucial and it is this collaboration among colleagues that he derives input from. Conversations, details, texture of surfaces or any other sensory impulse can be an inspiration for Matsumoto, who is looking for inspiration in every aspect of daily life.

Mitsubishi Fuso produces professional tools

In a world that moves at an ever-quickenning pace, the time and resources required to perfect the design for a truck may at first seem unjustifiable. Yet Mitsubishi Fuso continues to invest in this aspect of product development with the belief that a commercial vehicle is more than just about moving something from A to B. Every truck or bus on the line represents an opportunity to provide the most perfect tool possible for drivers and logistics operators. For the Mitsubishi Fuso design team, this means deciding each detail so that the FUSO vehicles running in more than 170 markets around the world can be the most durable, safe, and environmentally friendly business partners.

Mitsubishi Fuso contributes to society

Design at Mitsubishi Fuso is also deeply rooted in the understanding that trucks and buses serve communities. FUSO vehicles exist in the day to day, carrying both people and goods where they need to be. All models are therefore intended not only to run as reliably and safely as possible, but blend into any environment and have a minimal footprint. The FUSO design team envisions its vehicles not just as their own entity, but as part of landscapes and interactions. And, as the necessity for environmentally conscious societies becomes clearer and clearer, vehicle design at Mitsubishi Fuso is also evolving into a discipline that explores how trucks and buses can continue to keep the world moving sustainably, many decades down the road.

Mitsubishi Fuso creates products that attract

Designers of FUSO products understand that trucks and buses are moving ambassadors, not only for the brand, but for the business owner. FUSO vehicles are therefore intended to be beautiful machines that communicate the pride of the Mitsubishi Fuso team as well as our customers. The pursuit of attractive design also means creating tools that people will want to rely upon day in and day out, and involve in their endeavours. This ultimately reflects the core of Mitsubishi Fuso's role in the world: we develop mobility solutions to embrace a better life for people and the planet.

As Benoit Tallec comments, "FUSO trucks and buses are more than just simple transporters. They're made to be participants in our world, a world that's transforming day by day. That's why we didn't compromise on our design principles for our current product line-up, and why we're already applying them to our vision of the future."⁷

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Enjoy the Ride with Care

AT: Please tell us about yourself: what is your name, age, a bit about your family.

MFBA: I am Muhammad Fikri Bin Abdullah, aged 40. I am married, with three children (14 years old, 12 years old and six years old). Right now, I am working as driver at Innofreight Sdn Bhd, where I have been employed for three years now.

AT: What sort of truck is it you are driving? What is the purpose / what's inside the back?

MFBA: This is a Scania G410 truck and I use it for shipping container delivery with side loader or trailer.

AT: What do you like about this truck?
MFBA: Comfortable, easy to operate, easy to reverse, less issue.

AT: Please describe a typical day at work.

MFBA: I would usually arrive at the yard at around 8:30am. First, I perform my daily truck checks such as engine oil, brakes, battery fluid level, tyres' condition, turn signal, etc. to ensure a safe ride before starting the first journey of the day. Then I go to receive job instructions from control. At the same time, I will pick up jobs which are assigned to me as a driver via Grab Haulier system.

I like that I receive clear job instructions such as pick up location, delivery location, required equipment (trailer/side loader), delivery date/time, container type, additional instructions via Grab Haulier Driver app. Based on the instructions, I arrange for the required equipment. Once ready, I update the trip, stating that I am starting via Grab Haulier Driver app.



When I perform the assigned job, I report the delivery status and provide proof of delivery via Grab Haulier Driver app to ensure customer receiving the real-time status update.

AT: What is the area you cover? Do you operate all over Malaysia?

MFBA: I operate in Johor, Kedah, Pahang and Terengganu. My favorite route is to travel to Kawasan Perindustrian Tanjung Langsat or Pasir Gudang, Johor. The journey takes about five to six hours. Normally I stop at a safe rest station to rest after 2.5 hours' drive. There, I take a proper break of at least 30 minutes. This is also to ensure the tyre pressure safety after a long-haul drive.

AT: What do you enjoy about being a truck driver?

MFBA: I enjoy driving and operating trucks, this is my main interest. And I want to be a safe and responsible driver. Now that I am equipped with Grab Haulier Driver app, it improves the communication between drivers/ haulier and customer. I can provide

real-time status updates and proof of safe and complete delivery for the container that I deliver.

AT: What are the challenges in your job?

MFBA: Sometimes, there are unpredictable road conditions and weather. One needs to know to reduce speed when driving in hot weather to avoid tyre blow-outs. My motto is to be extra cautious when driving in bad weather and on uneven roads.

AT: Where do you eat? Can't be easy to park such truck somewhere.

MFBA: I look for restaurants which provide big and safe parking area. Before leaving the truck, I always ensure that the engine is turned off and the doors are locked.

AT: How do relax after a week at work?

MFBA: I work six days in a week. During my rest day, I relax and rest at home.

AT: Are people supportive when you carry out your work and you might block a road?

MFBA: I can easily locate the delivery location at the navigation map via my apps. Sometimes I need to call a warehouse or factory to ask for extra route guidance. Nowadays I can also easily contact them via Grab Haulier Driver app.

Usually, people are helpful; they assist me to ensure the container is delivered and parked at the correct location.

AT: What does your family think about your profession?

MFBA: My family is supportive, they understand how tough is my job and that it is not easy to be driving the whole day. I am sure they are proud with my profession.

AT: What was the most memorable moment in your career?

MFBA: I enjoy driving on highways, where I can enjoy the scenic driving experience in Malaysia.

AT: You mentioned that you are you a Grab Haulier – Smart Driver? Tell us about this, please.

MFBA: yes, I am Grab Haulier Smart Driver. The Grab Haulier Driver app is user friendly. Instructions are clear and simple. I have no issue using the app. I can receive clear job instructions and documents anytime, anywhere via the Grab Haulier Driver app. This reduces the communication errors. As I can report delivery status and provide proof of delivery via Grab Haulier Driver app, customers receive real-time status updates via Grab Haulier system. No more endless call from office to get status update. 





Van-Tastic: On the Road with the New Gran Max EURO IV

Recently launched, the new Gran Max with Euro IV engine is set to build upon the reputation the vehicle has garnered already. Stefan Pertz took two versions of the iconic van out for an in-depth test



A large industrial facility with a prominent green cylindrical storage tank and various metal structures and pipes. In the foreground, there is a paved area and some equipment. To the right, there is a vertical column with text and graphics related to the Gran Max van.

NEW
Gran Max
Delivering WORK HAPPY **Euro 4**
NEW
Gran Max
Delivering WORK HAPPY **Euro 4**

Signifier of a New Era -
Identifying the new Gran Max

It is always a very special moment when one gets to drive a brand-new vehicle. Even more so, when said automobile has been launched only recently. In this case, it was even more exciting as the test drive was to be done without any restrictions, such as being confined to a test track or just having a few minutes before the next driver can hop in. Testing the Gran Max pickup and panel van, two full days were allowed for with no limitations on where to go (within the limits of the Movement Control Order, of course).

There were two Gran Max with a newly developed 1.5-liter 2NRVE parked outside the Daihatsu headquarters in Shah Alam and the first day was to be spent with the pickup. As the wife dropped me off for my driving duties, she was full of excitement "Awwwww so cute!" she was heard. However cute this vehicle may be, it means serious business as many SMEs will attest to. The backbone of many delivery companies, small traders or contractors, the Gran Max has been a favourite among this clientele for some time. Considering the missions for the vehicle, the size, in this case small, does matter as it is to fit certain purposes.

No Nonsense, No Frills, Lots of Thrills

This is the first time I have piloted a Gran Max. Getting acquainted with the controls was easy: no frills and no nonsense. Inside the cab one will find everything that one

needs, but no extras that make the vehicle heavier or more expensive. This is a tool and it specified to perform. Immediately, I felt at ease as all the controls were easy to reach, clearly labelled and in logical positions. While there are three cup holders, ensuring that one stays hydrated or caffeinated throughout the day. The Audio Player doubles as USB outlet, while also allowing you to listen to your favourite playlists. I would say that the only thing missing in the Gran Max is a compartment that can hold paperwork. I would assume that a contractor or delivery driver would have sheaves of paper along for the ride and tucking them away in a tidy fashion would keep the cab uncluttered and the risk of things flying around at a minimum. The fact that there was no need for instructions on how to operate the vehicle speaks for the smartness in its design and how intuitive the instrumentation is.

As soon as the engine started, the fun begun. I have not driven a manual in a decade and this was such a blast to be able to be in full control of the engine again. The gear lever is positioned on the dashboard, which means that the leg space is free from the usual stalk that would stick out there and being in the way. Plus points here already. The turning circle on the Gran Max is something else, too. Reversing out of a tight parking lot or manoeuvring in a tight spot is made easy. The power steering is just the right mix of ease and feeling for the surface. Some vehicles have such powerful systems that the driver loses all sense of the road, which is something I never liked as it makes me feel like driving on ice. The gears shift smoothly and accurately and it is possible to operate all functions with ease while in transit. As reported by others, the Gran Max is accepted into the trucking community and on the highway, it joins the ranks of the big rigs. Drivers of commercial vehicles are aware of other professional drivers and act accordingly, even if the Gran Max is a small brother.

My situation was surely different from those that use the Gran Max as a business tool, but I hoped that users would have as much fun as me. The new engine is a real joy to manipulate and driving around one really can get





a feel for the power the engine has. Although I could not add weight in the form of cargo, it was not a stretch of the imagination how this vehicle would pull its weight with a maximum capacity of 800Kg in daily operations. As mentioned, the cab is done in a purist manner. It is a van, not a limo and therefore, one should not be surprised that there is not much cladding. However, the sound insulation is superb and after a day of driving, it would still be comfortable. The dashboard is one of the highlights as I appreciated the fact that it is uncluttered with only those lights, indicators and signals that are absolutely required. One can imagine that the Gran Max might find itself in rough terrain and any piece of equipment subject to rough handling might be prone to breakdowns. Keeping total cost of ownership down is a key premise nowadays and not having fancy electronics on board is one way of achieving this.

New Morning, New Vehicle: The Panel Van

With the sun barely up, it was time to swap the pickup with the panel van. One would expect that the empty van would be a bit louder than the pickup, the latter having a short cabin only, with not much of a resonating body built onto it. However, the panel van also proved to be very quiet and with cargo inside, it should be even more sound absorbent, thus more quiet. The silence is easily filled with the powerful sound of the stereo, another essential for the driver to keep them informed and motivated.

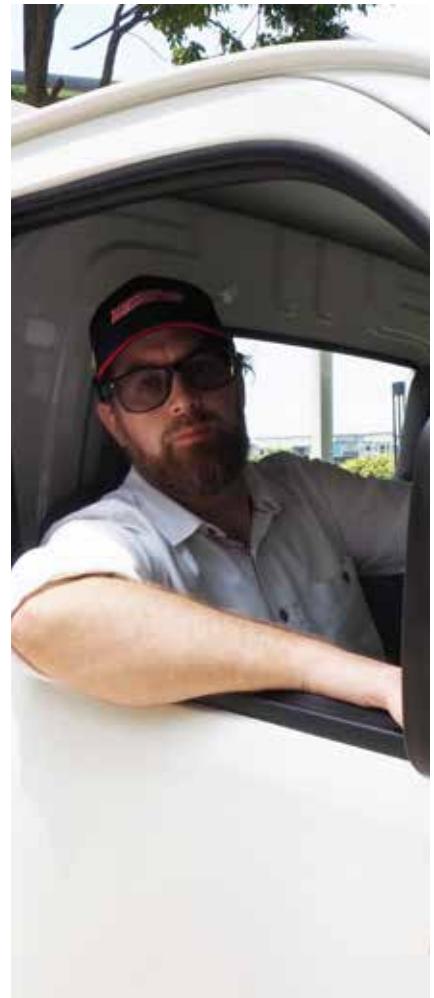
Unlike the pickup, the panel van was fitted with an automatic gearbox. Although I enjoyed the manual transmission of the pickup, I am likely to opt for the automatic version if I was to drive this vehicle in densely populated

areas like Klang Valley. A significant difference was felt when it came to the way the vehicle accelerated as the engine management of the automatic drivetrain would take over. The manual version is just a bit more juicy, but that may come at the expense of fuel consumption.

Speaking of which, fuel consumption is something that Daihatsu emphasises as being low and our test, while not done under scientific conditions, would confirm this. The "needle" hardly moved although our goal was not to set new records for the longest distance with one tank. Eventually, a refill will be needed and here too, the Gran Max is showing how user friendly it is. Many a times one would see a trucker crawling under his vehicle to put the nozzle into the tank, making this procedure look rather uncomfortable. Easy access to the fuel tank on the Gran Max is another plus point.

Car-like Handling

While on the road, one has to remember that this is a panel van and that the panels do block the view, creating more blind spots. Usually driving a passenger car, I had to adjust to this, although the overall handling of the Gran Max is very much akin to that of a car we drive for personal use. Meanwhile, the list of features making this vehicle a boon for its users goes on. The panel van sports sliding doors on both sides, which makes loading and unloading easy. Depending on the space one drives into, or how cargo is stored this could make a difference. One thing I should



point out is that I felt that I was just a bit too big for the Gran Max. The sitting position suggested that the design was done with people in mind that are just a tad bit shorter on average and not such hulking figures as myself.

The experience Summed Up

Overall, the Gran Max is a solidly put together vehicle, as one would expect from a Japanese brand. The value proposition is well carved out and with the various options that Daihatsu offers, there should be an application for many businesses. Standing out after two days of driving the two test vehicles was the ease of use and the absence of any functions or tools that are not critical to carry out ones duties. With the latest upgrade of the engine, which has gained in displacement, the Gran Max will be very well equipped to move goods while being agile around narrow streets. After two days of testing the Gran Max I can see why companies would opt for it, having proven versatility, fuel economy and giving added value in terms of driving pleasure. 



Hengst's Clear Vision

In 1958 Walter Hengst founded Ing. Walter Hengst KG in Münster. In doing so, he laid the foundation for the successful development of a company that is now run by the third generation as Hengst SE.

Hengst Filtration is guided by a clear vision: "We are the world leaders in filtration, making our planet a purer place". This is because with their products the company aims to protect people, machines and systems, resources are conserved and the living conditions on our earth are improved.

Hengst in a Nutshell

On our planet we are experiencing a rapidly growing world population, increasing consumption of resources, increasing mobility and globalization. So what is needed today is exactly what Hengst excels at: making things cleaner.

Hengst Christopher Heine, Chief Executive Officer of Hengst SE, deliberates on the direction of the company and provides prognosis about what the future might look like when it comes to filtration. "No matter where – nothing is working without filtration! We will continue to be a company that puts innovative filtration technologies for a cleaner planet at the centre of its activities, with around 3 000 employees worldwide, at 21 locations on four continents," he said

Responding to THE Challenge

Corona turned business upside down in just a few weeks. Hengst's customers have certainly had a business rollercoaster ride too, and Heine hopes that the economic recovery will make itself felt for them too. "The crisis also made it clear to me how robust the aftermarket is compared to the OE market, for example, and how new challenges mobilize new ideas and forces." As an example, within a few months Hengst has hatched the plan for and built up a completely new business area for "Health Care" with surgical masks and an antiviral air purifier. Heine is proud to say that he was very impressed by the unbroken passion and commitment of the entire aftermarket team in these extraordinary times.



Day-to-Day Innovative Products

During routine oil changes, the complete screw-on oil filter, consisting of the filter element, valves, springs, seals and oil filter housing, used to be replaced at every service. Although only the performance of the filter element is limited in the spin-on filter, all other components become waste products despite their full functionality. The Hengst oil filter system - with the core of the ENERGETIC filter insert - addresses the problem described and offers an environmentally friendly solution: the oil filter housing and valves remain firmly on the engine block with every oil change. Only the filter insert needs to be changed. The first generation went into series production in 1993.

Maximum reliability, as short a downtime as possible, high efficiency of the drive: These are decisive factors that automobile manufacturers and industrial users place on the technology. Intelligent fluid management and state-of-the-art filtration technology play a key role in protecting people, engines and machines.

Hi-Tech Solutions

The idea behind the Blue.maxx is to consistently rely on multi-level systems consisting of a pre-filter and a main filter. These are laid out on top of one another so that the change intervals are reached at the same time. In this way, the potential of both filters is optimally used.

The electric disc separator Blue.tron offers highly efficient oil separation and active blow-by pumping for crankcase ventilation. The oil entry into the engine's intake system is significantly reduced and the boost pressure level can be increased, which leads to an increase in engine performance and efficiency.

"With the Blue.on, a resource-saving alternative to the widespread screw-on oil filters has been developed. The aim was to reduce the environmental impact through the use of long-life components and recyclable filter elements as well as to ensure a high filtration performance over the life of a vehicle," Heine sums this up.

Big News, Further Growth

Heine told Asian Trucker that "We are very pleased that the Bosch Rexroth hydraulic filtration business has officially been part of the Hengst Group since April 1, 2021." According to him, the hydraulic filtration business is an excellent addition to the existing portfolio and fits in perfectly with their strategy of growing in industrial filtration as well as in the agricultural and construction machinery sector and expanding the company's programme and positioning themselves more broadly. The move is motivated by the fact that developments in global markets are becoming increasingly unpredictable. Technological upheavals such as the electrification of drives or digitalization are expected to have a significant impact on the business.

"All of these developments present us with challenges that we are already tackling together with our customers. The development of completely new business areas with the topics of gear oil filtration, smart filtration e.g. for cabin filters or solutions in the field of fuel cells are the focus here, as well as the expansion of the field of industrial filtration," he said. Despite the sometimes uncertain framework conditions, Hengst is still operating in a future market with enormous growth potential: Current forecasts assume that the global filtration market will double in the next ten years. Filtration simply remains exciting and offers so many opportunities to continue to exist as a specialist in this field in the future. 



"LEFT TO RIGHT: CHRISTOPHER HEINE - CEO / VOLKER PLÜCKER - GROUP VICE PRESIDENT FILTRATION FOR INDUSTRY & ENVIRONMENT"



Going for the Gap – Hoor Fatt Enterprise's Secret

Thanks to continuous improvements and innovations, this Johor-based company has made it through tough times and has emerged as one of the biggest fleets in the state.

A company that has been around for as long as Hoor Fatt Enterprise Sdn Bhd (Hoor Fatt) naturally has a secret to their success. In an insightful session, Mr Loh, Director of Business Development & Outreach, shares what it takes to go from strength to strength. As a Malaysia based logistics company founded in 1996 the company has come a long way to be operating a significant number of trucks and warehouses, thus being among the most important players in the state of Johor.

Originally a customs forwarding agent, Hoor Fatt is located near the Senai airport. Having access to several ports and an airport has always been a strategic advantage for the company. Loh stressed the remarkable fact that Malaysia is a key player in the production of consumer goods and that many companies producing such articles are located in the state of Johor. In the 1990s, Hoor Fatt decided to add trucks to their logistics business in order to offer a more inclusive service. Initially, small trucks were added in order to service a number of Japanese companies in the area.

The 2000s saw a different approach to the business, whereby the owners decided to add a haulage department. Although this happened after a decade of hardship, whereby Hoor Fatt has gone through a rough patch. Not only did the company have to fight for the business of clients, but then collection would be slow. "We did not have the expertise, knowledge or equipment. However, we were determined to turn things around." The close proximity to Singapore gave way to the idea to be providing services to shipping lines,

hauling containers across the border. And just as the first contract was to be executed it got cancelled. "We finally had the trucks, trailers and staff, yet we lost this business as a competitor was able to offer better rates."

This unfortunate experience triggered management to rethink the approach and to combine the offers for customs clearance and haulage. "In addition to adding hardware, we learned. We learned about the port systems and other related functions while at the same time adding more trucks." Today, the business has grown to be a significant player in the market. "We moved from serving intermediaries to offering an inclusive service." This, according to him, is a rare arrangement as it opposed the tradition in the industry. The gamble paid off as Hoor Fatt now lists a number of MNCs as their client. This approach is also reflected in what can be found in the company's vision: "Connecting Business". In Loh's view, the process of building connections between their customers and Hoor Fatt's relationship to their customers' customers is the key to success.

Technology plays a vital role in the operation of Hoor Fatt. An in-house Enterprise Resource System allows the



company to monitor all aspects of the business and to find ways to improve. "As such, the idea to work from home was not something that required us to adapt a lot. As our tools are cloud based, this was an easy step for us." Equipped with software and hardware, it was also possible to expand into freight forwarding for ocean freight. Currently, freight rates have increased drastically, capacity is scarce and thus, the diversification is advantageous.

In line with the ambition to fill gaps in the market, the company added their first Hammar Sideloader to the fleet in 2018. Recently, a second unit was acquired to service clients needing such specialised service from their haulier. "We noted that there has been an influx of SMEs that have set up shop here. However, many did not build warehouses with loading bays or they occupied spaces that existed, but did not have ramps." Loh said that these businesses can make use of a Sideloader to load or unload containers on the ground.

Conscientious about the company's reputation, Hoor Fatt opted for Hammar Sideloaders as they are perceived as the most reliable type of such equipment. The proximity to an authorised service centre and spare parts availability were other decision making criteria. Loh lauded their partners as being professional and supportive as the service would normally be scheduled to take place after official working hours.

The two Sideloaders are handled by six dedicated drivers. Loh says that they have a good reason to limit the use to drivers that have been trained. Safety is an important aspect when handling containers and if one were to mis-manage the Sideloader, then the operation can become more accident prone. Loh said that the company also does not allow drivers to train drivers on the Sideloader; only Hammar-trained personnel is to operate the Swedish equipment. "You cannot make any shortcuts and we don't want random drivers to use this equipment."

With a reach of up to Muar, Hoor Fatt is using the sideloaders in innovative ways. In some cases, companies investing in Malaysia will move their machinery to the country. In such a case, the machines will be delivered using the Sideloaders. "In such cases, the machines do not need to be moved into the warehouse,

but have to be placed outside first before installation takes place," Loh explained. Loh has identified limitations though, "It is a tool to move containers, however, it is not a stacker. It is crucial to understand that Sideloaders are very specific tools and we have heard of people that have mis-used the equipment." According to Loh, the proper use ensures that Sideloaders will only ever need to be serviced according to schedule, and serviced on time to give the optimum uptime.

When reviewing the fleet, one will notice that Hoor Fatt deploys a good number of Renault and Iveco trucks. Closer inspection reveals that these are imports from the UK, fitted with EURO V or EU VI engines. "Typically, people importing such trucks will disable the exhaust treatment system and other components, thus reducing the engine to EURO III. We do not do that, we operate these vehicles as they come, as EURO V or VI compliant." Loh explained that this is a testament to the company's ongoing ambition to be at the forefront of sustainability. He also cautioned those that do not upgrade their vehicles that they will eventually lose out, should the government decide to move towards higher emission standards. 



SR Gemilang – The First Truck Operator in the Northern Region to Sign up for Scania's Ecolution

SR Gemilang – The First Truck Operator in the Northern Region to Sign up for Scania's Ecolution.

SR Gemilang became part of Scania Malaysia's milestone when they became the first truck operator in the Northern region to sign the Scania Ecolution partnership agreement in a simple ceremony. The signing was sealed between Muhammad Jaafar, Director of SR Gemilang Transport (M) Sdn Bhd and Heba Eltarifi, Managing Director of Scania Southeast Asia.

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With a total count of 80 trucks, SR Gemilang added four units of Scania New Truck Generation (NTG) that efficiently delivered the best uptime among all the brands in SR Gemilang's fleet. Five more units will be delivered to SR Gemilang's fleet in 2021. The order for these additional units was signed and sealed by M. Aziz, Managing Director of SR Gemilang who was also in attendance. The earlier Scania trucks that SR Gemilang acquired in 2015 delivered very good returns as the fuel savings were the best amongst the entire fleet. However, the NTGs that are equipped with advanced powertrain and aerodynamic solutions delivered further 3 percent fuel savings.

"Our customers are very happy that we decided to purchase the NTGs to carry their goods as they, themselves, know that the NTGs are well known as the best and most reliable truck in the market. Our customers are assured of on time delivery of their goods," said Jaafar. Muhammad Jaafar, took control as Director with M. Aziz taking the lead as Managing Director and both started managing haulages of mostly electronic items, food products and garments, to name a few.

The business started in 2007 with six trucks, three of which were Scania trucks but the fleet expanded very quickly as their service quality and marketing efforts paid-off many folds. Operating from their headquarters in Ipoh, the Port Klang and the KLIA, SR Gemilang was successful in creating associations with other logistic providers for joint-venture projects, sub-contracting either way.

The increase in demand for reliable and trustworthy transportation was also captured by SR Gemilang, especially deliveries to and from the Ipoh free-trade zones. "We are very pleased to be part of Scania's global initiative. We work hard for our family, and it's up to us to do whatever we can to care for the environment and set a positive example for our children to follow. I truly hope that they too will do their part in caring for the environment," concluded Jaafar. 



ICONIC TRUCKS

Asian Trucker Media will be releasing its first ever coffee table book, Iconic Trucks, around June. The coffee book aims to serve as an unique collection of vehicles which are the icons in the industry. Iconic Trucks will feature over 40 trucks in four different categories namely historical trucks, modern vehicles, purpose build and future icons.

Inspired by the work around trucks and the "Truck Feature", a regular column in the Asian Trucker magazine, this book is a collection of vehicles which are icons of the industry. Many of the vehicles featured are easily recognisable as they have been instrumental in building countries or even regions, others are built to fit a very specific purpose.

This coffee table book is a must-have for any enthusiast. The high quality book features 45 trucks in four different categories: historical trucks, modern vehicles, purpose build and future icons. Weighing in at over 160 pages, this large format is an eye catcher that will liven up your lobby, office or bookshelf as a reference book.



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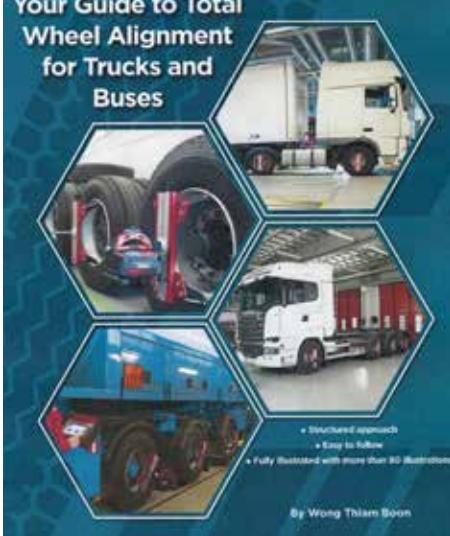
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Stefan Pertz,
Editor, Asian Trucker Malaysia
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Hyva Electrifies Refuse Collection

Energized with the latest technology, Hyva electric waste collection vehicles have quietly made their mark in the market.

Maintaining world energy security, ensuring human sustainable development, and developing pure electric vehicles are all trends for the future. The core system of pure electric vehicles is the drive motor, controller, and battery system. China electric vehicle output leads the world, The R&D and production of pure electric vehicles in China also holds a commanding position.



In 2020, 24,000 units of waste collection vehicles were sold in China. EV waste collection vehicles accounted for three percent of this total. Among all players, Hyva electric waste collection vehicles rank No.2, with a market share of 13 percent.

The Hyva electric waste collection vehicle superstructure is boat shaped, which ensures that there is no leakage during transportation in this high compaction force with high

payload solution. The 4x2 truck with a small turning radius which makes the truck very flexible and efficient in high traffic areas. There are no emissions during the waste collection process. This waste collection vehicle can be used in rural and urban areas, and also, for waste collection from large events.



2018, Wuhan, 10 units RCM07 EV, 2 units RCM03 EV.

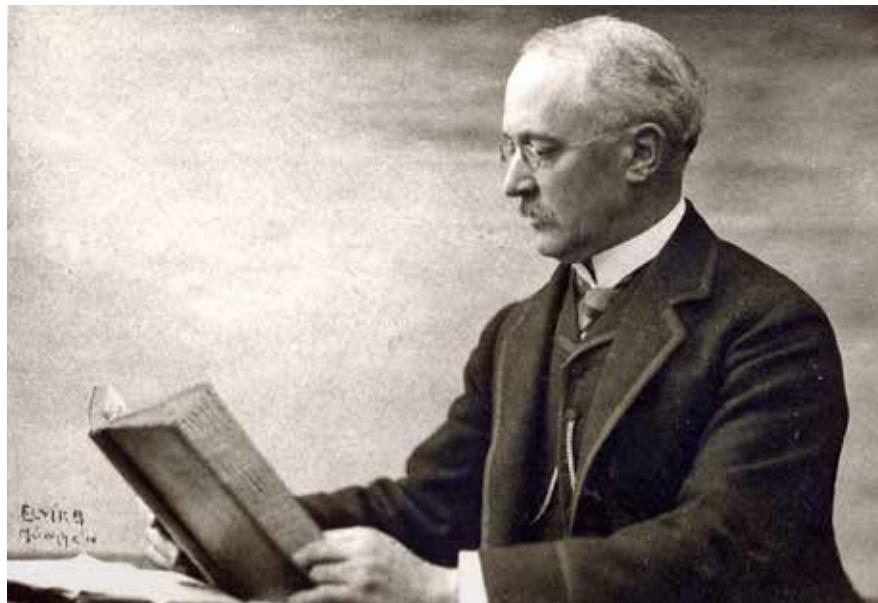


2018, Nanjing, 36 units RCM03 EV.



The Hyva pure electric small waste collection vehicle is an important part of Hyva's Satellite solution. The collection vehicle can match with large RCBs, and also with Hyva portable compactors, Or, it can work independently. The satellite solution is very efficient and flexible; no leakage, no pollution.

The development of new products and systems depends on the continuous innovation of each enterprise in the industry. Hyva Waste Handling Solutions, as a global waste sorting collection and transportation expert, is committed to building an end-to-end waste sorting service from waste sorting disposal, through sorting collection and sorting transportation to sorting final treatment. This approach will make a positive contribution to global environmental protection. 



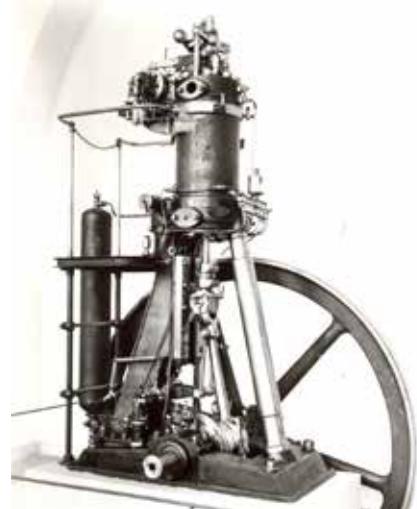
The Diesel Engine: Powering through Decades

The invention of the Diesel engine has been a revolution, especially in the transport industry. We take a look at the development of the powerplant over the years.

As a means of propulsion, Diesel engines have been with us for over a century. What unites most truckers, is the common engine under their hood, no matter if it is a cab over engine or a conventional design. It is noteworthy that the development of this engine type is tightly associated with the MAN brand. We have a look at the development of the Diesel engine over the years and how it continues to see improvements.

Meet Rudolf Diesel

Diesel, born in Paris in 1858 to German parents, learned about the poor efficiency of the steam engine during his studies at TU Munich university. In 1880, Diesel becomes head of the French branch of Professor Carl von Linde's refrigeration technology company and, on his own initiative, builds an ammonia engine. From 1890 onwards, he manages Linde's engineering department in Berlin. Further research gave him the idea for an efficient heat engine.



Rudolf Diesel set up his first shop in Paris to begin development of a compression ignition engine. A slow burn, the process would last 13 years. In the 1890s, he received a number of patents for his invention of an efficient, slow burning, compression ignition, internal combustion engine. The Diesel Engine was created. In 1893, he is granted the German patent no. 67 207 for the "Working method and design of internal combustion engines", and signs a contract with Maschinenfabrik Augsburg for the construction of a test engine. Working now entirely on a freelance basis, Diesel

is able to devote all his time to the development and construction of his engine. Based on the test engine, the effective output is successfully verified for the first time in 1895, registering an efficiency of 16.6 percent.

From 1893 to 1897, Diesel further developed his ideas at Maschinenfabrik-Augsburg AG. Thanks to the support of Heinrich von Buz, the world's first operational diesel engine (on display at the German Museum in Munich) is built at Maschinenfabrik Augsburg between 1896 and 1897: A series of improvements and subsequent tests led to a successful test on February 17, 1897 when Diesel demonstrated an efficiency of 26.2 percent with the engine.

Diesel's third test engine used in the successful story in 1897 acceptance test 1 cylinder, four-stroke, water-cooled, air injection of fuel. Output: 14.7 kW (20 hp). Fuel consumption: 317 g/kWh (238 /hp-hr) Efficiency: 26.2 percent. Number of revolutions: 172 min⁻¹, Displacement volume: 19.6 L Bore: 250 mm Stroke: 400 mm. Following its commercial launch in 1898, the innovative "Diesel patent heat engine" still has to clear several hurdles to fully meet the expectations of its operators.

At the turn of the century, the diesel engine begins to conquer the world. It is used in stationary plants, and from 1903 it is also used for marine propulsion and to this day it remains the most economical of all heat engines. Rudolf Diesel lives to see only the first signs of the major impact his pioneering achievement would go on to make. He went missing during a sea passage from Belgium to Great Britain in the fall of 1913 and has since been presumed to be dead.

First Automotive Engine, First Truck

The first automotive diesel engine with direct fuel-injection was used in 1923. It was the 1K14/19 single-cylinder diesel test engine with direct fuel-injection (13 hp, 10 kW), which was an essential prerequisite for significantly increasing engine speed, was used to acquire important findings relating to direct fuel-injection. Tests with direct fuel-injection started in year 1919.

On 12 March 1924, MAN engineers Sturm and Wiebicke set off from the factory at Augsburg, headed for Nuremberg in an M.A.N. Saurer truck. The 4-tonne platform truck was powered by an experimental diesel engine which for the first time injected fuel directly into the four cylinders.

With around 40 HP in available output, the test drivers managed to complete the 140-kilometre trip in five and a half hours. This successful drive was a baptism of fire for technology that enabled the economical diesel engine to be built compactly.

First V-Type Diesel Engine

Using piston and connecting rod from a VV 40/54 four-stroke diesel engine and articulated connecting rods used for the first time the V-type diesel engines (cylinders arranged in a V shape) were created in 1965, replacing the traditional parallel connecting-rod construction.

MAN developed a new V8 engine for the 16-L class with an output of 500 kW and 3 000 Nm of torque for its TGX and TGS ranges of heavy trucks. To reduce NOx, MAN has applied an SCR system with AdBlue injection.

In 2012, new models were revealed, though these lacked the option of a V8 engine due to a lack of demand. The carryover 15.2 L D38 series inline six-cylinder engine added into the line-up for 2014, replacing the D28 V8 engine.

The Euro6c Tailor-made Technology Thanks to Modular Construction

As the design of all the exhaust gas components for MAN diesel engines is strictly modular, the vehicle manufacturer can choose between different emission levels without redesigning the vehicle. The obvious benefits for the customer are a maximum flexibility with a minimum of development, reconstruction and cost to ensure that the Euro 6c emission limits are reliably met, the MAN PURE Diesel® technology had been combined with MAN AdBlue (SCR) and MAN CRTec. Both technologies have proven to be reliable and are already used in the serial products of MAN. Stage c of

the Euro 6 standard imposes stricter requirements for on-board diagnosis (OBD) and limit value monitoring. The changeover to Euro 6c has no implications for the normal operation of the vehicle.

The D0836 6-cylinder engine

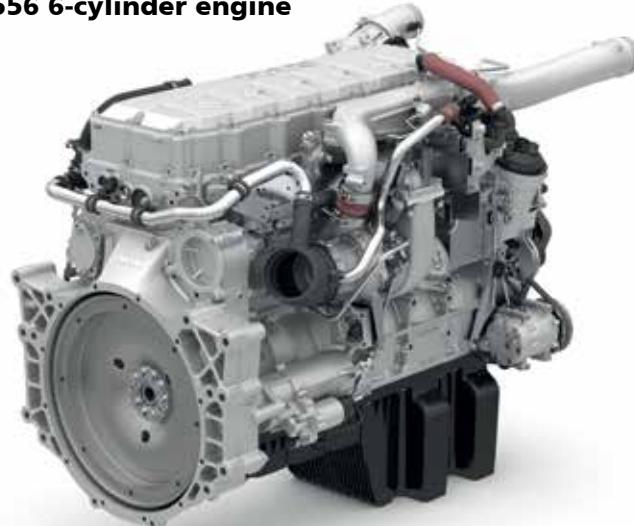


MAN Truck & Bus SE presents the vehicles with efficient diesel engines in power ranges from 110 kW to 397 kW in exhaust emission stages Euro 6, EEV, Euro 5, Euro 4 and Euro 3. The powerful and quiet engines from MAN prove best for building site vehicles and special vehicles with guaranteed efficient and robust propulsion in short and long-haul trucks, even in cases of heavy loads.

The diesel engines are used in buses and special vehicles with output ranges that extends from 132 kW to 371 kW in exhaust emission stages from Euro 6, EEV, Euro 5, Euro 4 right up to Euro 3.

The gas engines are available in outputs from 162 kW to 206 kW in exhaust emission stages Euro 6 and EEV. The MAN engines finds application in mini, midi, and city buses, intercity and tour coaches as well as street sweeper, airport buses and aggregates for trolley buses.

The D1556 6-cylinder engine



Meeting the Euro 6d emission standard was another development goal. MAN opted for a compact and robust design without exhaust gas recirculation. The SCR system enables the brand to implement higher NOx figures than the D20.

This engine featured the single-stage turbocharger and the new common-rail system with up to 2 500 bar among other special features. The peripherals on the D15 are also characterised by their low power consumption. Available with 330Hp to 400Hp for 9.0L engines, these are characterized by improved engine efficiency.

The turbo EVBec with up to 350 kW braking performance from 9.0L of cylinder capacity should actually be a benchmark according to MAN. Up to 1 800 newton metres of torque over a wide engine speed range also enabled them to achieve drivability with the D15 to be on par with its D20 predecessor.

The D2066 6-cylinder engine



Economical 10.5 L engines with state-of-the-art technology – Especially the Common-Rail-Injection guarantee low consumption combined with high performance.

The D2066 CR offers improved fuel economy of up to five percent compared to the older D28 in the 430 HP category (967 kg dry weight). Production engines offered from a range of 360 Hp to 440 Hp.

Hence, this engine type offers the biggest payload advantage, paired with long intervals between oil-changes of up to 120 000 km (long distance transport). The use of cooled external EGR in all D20 models allowed for approximately 1,5 Mio km until a major engine overhaul is necessary.

The D2676 6-cylinder engine



Diesel engines of the D2676 series are compact with an output range from 110kW to 397kW. Used to supply power to Trucks, buses and special vehicles, the six-cylinder naturally-aspirated engine with turbocharging in an inline arrangement gets sufficient cooling for tough applications.

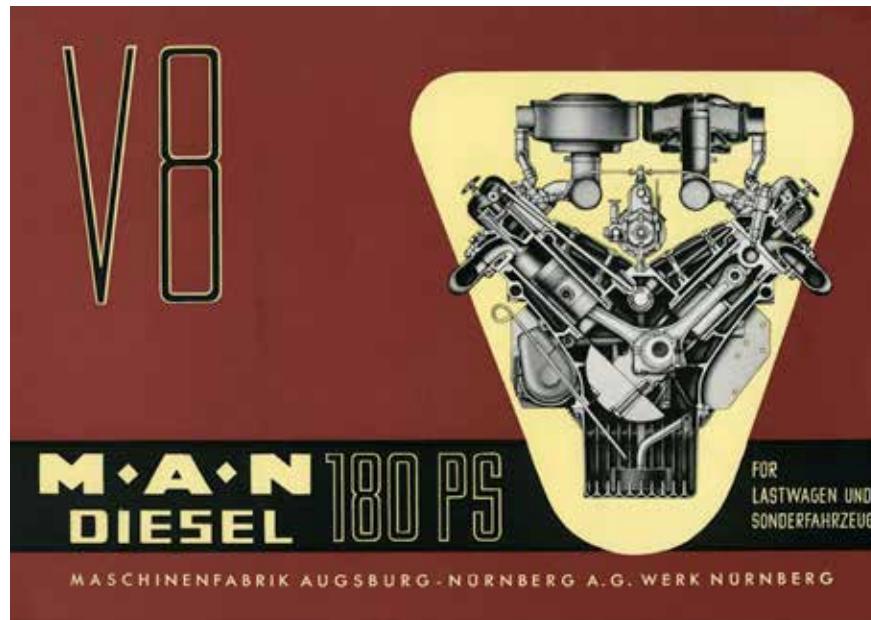
The highly-efficient injection and combustion system ensures optimum engine performance at low consumption. This development stage comes with 480Hp and 540Hp at between 2 300Nm to 2 500Nm of torque.

The robust engine design with compact dimensions allows for worldwide-approved operation. This robust and dependable engine is available in exhaust emission stages from Euro 6, EEV, Euro 5, Euro 4 and Euro 3. Output ranges from 162kW to 206kW in exhaust emission stages Euro 6 and EMV in gas vehicles.



The D3876 6-cylinder engine

These MAN engines offer a power spectrum of 415, 450 and 485 kW (565, 612 and 660 hp). A 138 mm bore and a stroke of 170 mm create 15.26 litres of capacity.



Consequently, the 6-cylinder engine offers a maximum torque of 2 700 to 3 000 Nm between 1 050 and 1 450 rpm, and therefore sufficient power for large tractors or harvesters.

A Common Rail injection system with 2 500 bar creates a high level of pressure and therefore improves fuel injection control in the combustion chamber, resulting in lower fuel consumption and improved emissions.

With a dry weight of 1 337 kg, the MAN D3876 is more compact and lighter than its predecessor, the D2868, at a comparable output.

New MAN D08 engine with SCR

Thanks to simplified emission control (without AGR) the power plant is even lighter and more efficient. This engine Euro 4 and Euro 5 versions can be deployed worldwide due to their high sulphur tolerance

The Euro 6c driveline for the heavy series combines the new D26 or D38 engines with the new generation of the automated MAN TipMatic. A manually operated gearbox with its new gearbox functions forms an overall package offering exceptional performance:

- 20 hp more power and 200 Nm more torque in all gears
- 'Revolution in engine brakes' turbo EVBec with 630 kW brake output

Tata Motors 407: Mobile Money Maker

The Tata 407 was the first LCV designed for Indian businesses and Last Mile Transportation. It was introduced in 1986 and quickly became popular and went on to dominate the LCV space with a market share of 84 percent within just five years of its introduction. A product that was conceptualised and not merely adapted for the Indian road, the Tata 407 series comes with competitive pay load and operating economics. In the market for around 34 years, the Tata 407 has been continually developed and improved upon whilst allowing customers the choice of both the LPT407 series and EX2 series.

The vehicle is specially designed for high reliability, rural applications, maximum safety and extra comfort and boasts of the only engine that has seen the various phases of emission regulations in India while successfully migrating to each phase.



Rightly named as 'The Non-Stop Profit Machine', this vehicle now offers its owners the Power of Six: profit, performance, driving comfort, convenience and connectivity, value as well as safety and security, thus providing owners a powerful tool to grow their business to its fullest potential.

Tata Motors is the only manufacturer in India selling the SFC Styled Cabins with the 'Unique Nose' for the highest levels of safety. To accommodate inner-city driving, the latest version of the 407 has the best in-class braking performance with new H2LS brakes and power steering plus reverse parking as standard equipment. It comes with the strongest chassis with HSS 800 steel with high tensile strength, bolted design for increased modularity. **T**



VECTO: Continental Offers CO2 and Fuel Consumption Calculator to Perform Sustainability Check on Its Tires

Continental tool makes sustainability transparent and highlights potential savings, offers calculator that computes CO2 emissions for tires on steer and drive axles

The topic of VECTO and the EU Emissions Regulation currently ranks among the most pressing challenges for the haulage industry. The industry's CO2 emissions are to undergo radical reduction by 2030, and the tire selection process is of direct relevance here. To make that process more transparent, Continental is providing detailed information on its website and has just added an innovative CO2 and fuel consumption calculator to its online offering. This new tool is designed to let fleet operators calculate exactly how much they will save in terms of emissions by choosing the right Continental tires for their specific applications. Because the interplay of the tire's mission profile, structure and rolling resistance makes a decisive difference to how much fuel is consumed and/or can be saved.

With this tool, Continental is offering its customers a comprehensive, practice-oriented package that informs them in detail about the EU Regulation and its impact on the haulage industry. Development of the new calculator, which rounds out the existing microsite, was based on the VECTO method of calculation. On the microsite, users will discover how VECTO works and learn about the impact of rolling resistance on fuel consumption and the associated costs. The calculator delivers a clear illustration of the difference that tires can make in efforts to reduce CO2 emissions.

Focus on rolling resistance

When a vehicle is in motion, the tires are exposed to a range of different forces that cause the tires to continually deform and recover their shape. In this process, known as hysteresis, energy is lost (i.e. dissipated in the form of heat). Hysteresis is one of the main causes of rolling resistance in tires. To overcome the rolling resistance and maintain the vehicle's forward momentum, more energy is required in form of fuel. So rolling resistance is a major factor in determining the fuel consumption of a vehicle and the associated CO2 emissions. This shows how important it is to select the right tires for the vehicle's mission profile, because together with mileage, grip and robustness, rolling resistance is a key factor in determining the performance of a tire.

When fleet managers calculate the efficiency of their fleet, they need to be aware of rolling resistance as a cost factor. And so Continental developed its new CO2 and fuel consumption calculator, making the choice of tires a transparent process for the customer.

Fuel consumption figures by tire type and mission profile

Here's how the calculator works: The customer starts by entering the mission profile of each vehicle. Based on telemetry data, the individual payload and application of the vehicle can also be factored in. The calculator uses this information to work out how much fuel the vehicle will consume with each specific type of tire and shows the different fuel consumption figures for each tire line dependent on the application. "The tires should be selected to match the type of work the vehicle is expected to handle," says Straten. "We recommend different tires for long-haul work than for regional distribution duties. The choice of tire makes a decisive difference in terms of the vehicle's fuel consumption and the associated emissions. And sustainability has become a key factor in our customers' purchase decisions." Complementing the Tire



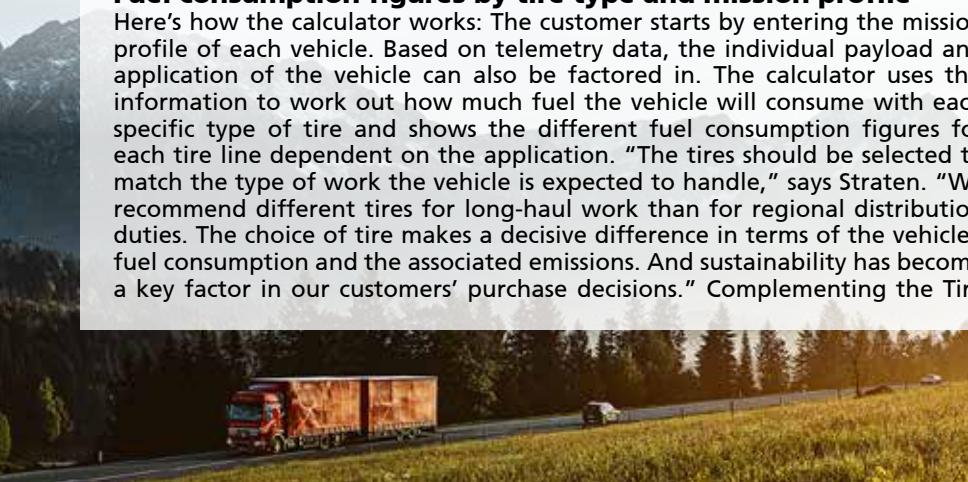
Finder, the new calculator now provides the customer with a clear picture of each tire's sustainability.

Choosing the right tire with the Tire Finder

The Tire Finder platform helps fleet managers choose the right tires for their long-haul or regional distribution operations. The core requirements of the fleet are analyzed in two steps before the Tire Finder recommends a suitable tire line. In the first step, the tool distinguishes between the fuel efficiency and mileage of the tires. The second step takes their everyday mission profile into account. Do they operate mainly on motorways or regional roads? Does the truck usually handle long-distance haulage or short-haul deliveries? The Tire Finder informs the customer about the tire portfolio and the characteristics of the individual tires. The customer then decides which type of tire makes the best fit for their business.

Backstory: VECTO and cutting CO2 emissions

According to EU data, 25 percent of CO2 emissions from road transport across Europe are generated by heavy-duty vehicles. Along with tire pressures, vehicle configuration and load distribution, the rolling resistance of the tires plays a decisive role in determining fuel consumption and thus CO2 emissions. The European Regulation setting out CO2 emission standards for new heavy-duty vehicles came into force in 2019. It specifies that vehicle manufacturers must cut the CO2 emissions of vehicles covered by the Regulation by 15 percent by 2025 and by 30 percent by 2030, in both cases using July 2019 to June 2020 as the reference year.



Electric Vehicles – What is the Status in Malaysia?

EUROCHAM Malaysia held an online Advocacy Talk to give an update on where Malaysia is standing with the implementation of electric vehicles. This session on 19 May 2021 was a follow-up to the last such event that took place six months ago.

Moderator Mr Pierre Brochet, Head of Eurocham Automotive Committee, led the seminar, under the header of "Six months after our first webinar on the subject, where are we now?" This follows the recent announcement that the Malaysian Government is mulling over new measures to foster the development of EV in Malaysia. Discussion covered the latest developments and the current state of EV motoring in Malaysia and its anticipated future prospects and also inter alia the current situation and future of EV private light and commercial vehicles, the charging network, tax and other incentives, the environment, industrial competition in South East Asia.

Focusing on the commercial vehicle segment was David Lantz, Sustainability Manager at Scania Malaysia, who gave an update on the developments in this area. Although Malaysia has been going through a number of movement restrictions, a lot has happened according to him. The first issue he touched upon was the move by the government to set up a central procurement agency for electric buses. "There are already several electric city buses on the road in Malaysia. Considering that they have an operational life of 15 to 20 years, from a total operational cost perspective, it makes sense to invest in electric city buses today". Lantz hailed the effort of the government to have half of the feeder bus fleet for the MRT to be electric.

Further, he mentioned that the Malaysian government is taking not only the lead, but an inclusive approach to developing policies, whereby OEMs are being invited to participate in discussions around this topic. Over the last few years, manufacturers, like Scania, have been involved in consultative roles and this very advocacy is now slowly coming to fruition. Lantz mentioned that it is the city bus segment that is now gaining momentum.

Lantz highlighted that there are significant differences between passenger cars and commercial vehicles that need to be considered when implementing electric vehicle policies. He pointed out that this development is the biggest technology shift in the past 100 years, thus there are a lot of challenges. Especially, when it comes to the charging infrastructure. Porsche's representative, Mr Christopher Hunter, CEO of Sime Darby Auto Performance, said that fast charging a performance car would take 55 KW, with super-fast charging 175 KW. Lantz pointed out that the upper end of that spectrum would be needed for every bus and truck that is using an electric drivetrain.

Another significant difference he elaborated on was the annual mileage vehicles travel. An average coach bus would be travelling 10 times or more kilometres than a car, while trucks can easily clock in five times the milage of a passenger car. "We also have to remember how buses and trucks operate and that will determine how these vehicles are being charged. For instance, city buses come to a depot every night, where it is easy to charge them and have them ready for action again in the morning. Trucks however, do not always come back to a basis as they have stops all over the country and may not be returning to base for up to a week." Trucks also carry more weight, thus their energy consumption is higher. He envisioned that trucks would need to charge whenever they reach a freight yard and while paperwork is handled a 30 to 45 minute charge is given to the truck.

Finally, Lantz pointed out that trucks (and buses) are assets for transport companies and that these assets are to generate profit. Although financing exists, the TCO of electric vehicles still needs to be improved. In Malaysia, Diesel



is more than 60% cheaper than in countries like Sweden, while in Sweden electricity costs a third of what it is in Malaysia. Lantz predicts that the cost for the vehicles themselves will come down eventually, when economies of scale will be achieved and with that, the cost for the propellant will become a more decisive factor.

Concluding, Lantz pointed out that EVs ability to lower CO2 emissions will be limited to the source of electricity. So if you can connect a charger directly to solar panel, that will be great but if you take electric from the grid, which is very dependent on CO2 interested sources such as coal and gas, the CO2 reduction will be small. Thus, he strongly encourages Malaysia to accelerate and expand the adoption of renewable electricity generation. For now biodiesel, of which Malaysia has a lot, has better potential to reduce CO2 emission for heavy commercial vehicles as it can reduce emission with up to 80 percent.

Regardless of what source of energy that we use, the easiest way to reduce emissions is simply to use less energy, something that Scania is actively doing with more than 30 customers under their Ecolution partnership program which has proven to reduce fuel consumption with up to 10 percent. 



ZF Commercial Vehicle Control Systems Combats Fakes and Counterfeits

The issue of fake and counterfeit parts in the market is an issue that has occupied some space in discussions for a while. Brands are taking steps to protect their clients from harm from such products.

Every genuine WABCO branded part is made of high-grade materials and is rigorously tested by ZF Commercial Vehicle Control Systems (ZF CVCS) before leaving our factories. And from the moment of manufacture, every part has the full support of WABCO's worldwide customer service network of thousands of authorized dealers and workshops. As a tier one supplier working with the world's leading Original Equipment Manufacturers in the commercial vehicle industry, ZF CVCS has the experience, commitment and scale to meet the most rigorous production and safety standards.

We were talking to Kenneth Tang, Business Leader, Asean, Fleet Solutions and Trailer Systems of the ZF Group, Commercial Vehicle Control Systems to find out more about their genuine parts. As ZF Group is a provider of OEM components and parts, their products are delivered with your new vehicle. We wanted to know just how much of a problem are fake / counterfeit parts in our parts of the world.

Reputable Supplier

ZF Commercial Vehicle Control Systems (formerly known as WABCO) is the leading global supplier of braking control systems and other advanced technologies that improve the safety, efficiency and connectivity of commercial vehicles. From their perspective, counterfeit is indeed a challenge that exists in the market. These products, usually cheaper and of inferior quality, are disturbing the market order, being harmful to the fleets, drivers, and putting vehicles, drivers, as well as goods in danger.

With the Vision Zero Accidents and Zero Emissions, ZF focuses on providing technologies and solutions to make the Commercial Vehicle industry safer, smarter and greener. If we talk about safety, braking technology is one critical elements for providing protection to the commercial vehicle ecosystem. Genuine parts are essential to ensure that the protection is effective and the benefits to the drivers and vehicles are maximized.

Mulit-layered Protection

It has come to the point, where manufacturers have to consider the protection of their intellectual property as well as the reputation of the brand by

fighting off fake and counterfeit products. There is now a significant effort made by ZF CVCS to develop systems and methods to allow for identification of genuine parts. The measures extend to the training of the thousands of distribution partners and down to the way boxes containing parts are designed. Several methods to protect the users from fake or counterfeit products can be found on the box.



Verify Security Seal

The Security Seal clearly shows whether a shipment has completed its journey in the logistics chain intact and in its original packaging. The Security Seal is placed on top (either mid, left or right side of the box) to close the box. When a Security Seal has been removed the word "opened" appears in six different languages and remains clearly visible even after re-closure.

As part of ZF, the global leading technology company, the WABCO brand has a long-standing history and experience in providing products and solutions with high quality.

Every genuine WABCO branded part is made of high-grade materials and is rigorously tested by us before leaving their factories. And from the moment of manufacture, every part has the full support of a worldwide customer service network of thousands of authorized dealers and service partners.

"We have invested in packaging technologies and security seals since 2017 that make it easier to quickly identify a WABCO brand original part by the fleet operators and workshops. Through continuous training programs to our extensive network of Authorised Distributors and WABCO Service Partners, we can support the fleet owners with our Genuine Part program and easy access to WABCO brand original part," Tang elaborated.

The silver PrioSpot is part of the WABCO label displayed in the lower left corner of the label. Every PrioSpot is unique. No Code will match another one. The four PrioSpot characters should match the last four digits of the unique serial number. In direct light the PrioSpot and the WABCO logo shimmer in



rainbow colors. In diffuse light only silver and black colors appear. Under direct light a moving character is visible. This Image repeats the last character of the unique serial number.

Also, the brand kept busy during the lockdown to improve these features and launched a Unique Service QR code in 2021. Fleet operators and commercial vehicle owners can easily access ZF's digital service platform and authorized networks with modern digitalized technologies. Together with their authorized networks, Tang and his team can quickly support the fleet operators and vehicle owners on their questions on parts authenticity and with solutions.



In order to verify Unique Serial Number (MAPP Code) users can use one of the two options: Scan Data Matrix Code with the free NeoReader application or manually enter the unique serial number (MAPP Code) in their online solutions centre. Another layer of protection has been added by using case sensitive codes.

Products from dubious sources are potentially harmful, as explained above. The question is, what possible damage can come from parts that are imitations. Tang explained that the WABCO branded braking technologies and components are used widely in commercial vehicle and that they are tier 1 suppliers to world leading O.E.M. in the commercial vehicle industry. Braking is one of the most important safety components in the systems of the commercial vehicle. Brake failures from the use of fake / counterfeit parts can lead to the decrease of operations efficiency, damage to the goods and in the worst case, the loss of people's safety or lives.

Sometimes it is rather difficult to tell a genuine part apart from something that is not originating from the manufacturer. If such a part fails, or when in doubt, can

turn to the global network that the company has established. In case someone makes a claim against the WABCO brand, there is a clear procedure on how they go about this to ascertain that the part is genuinely yours and to find out what happened.

"Our associates and authorized network of Distributors and Service Partners are trained through our professional training from WABCO Academy. We have a straightforward and detailed claims-handling process in place. With our braking diagnostics tools, software and professional training to our partners, we can support and resolve the issues in cases of claims", Tang says.

Additionally, ZF CVCS has a global and regional footprint for the claim investigation center, with the purpose to support in case there are field claims. Most of the claimed / defective parts will be sent out to the CIC (Claim Investigation Center) for a detailed investigation and root cause analysis, and an investigation report which includes authenticity of the product will be released.

Naturally, buying from an official distributor eliminates the issues associated with fake / counterfeit parts. ZF CVCS has a wide distributors network and all of them have been well-trained regarding product technology, business ethics, and are evaluated on a regular basis. Tang stated that "We also have reached legal agreement with them to ensure the authenticity of the WABCO branded products they are selling. In addition to that, all the WABCO branded products are traceable in their selling system."

It is the current situation that braking is the component that may sometimes be overlooked compared to the engine, transmission and axle.

That is also why ZF CVCS is making efforts to cooperate with

governments, associations and fleets to raise the public awareness of the importance of braking products.

For those vehicles that have been going through their life-cycle, ZF CVCS is offering competitive and cost-effective solutions to the Commercial Vehicle aftermarket under the brand of ProVia, which is distributed by the same authorized network.⁷



Kenneth Tang



Driving Under the Influence

I know. You expected me to talk about how alcohol can impair our driving skills. However, I would like to discuss something else: The power of socialites and celebrities to support a safety culture on the road. Personally, I have never had the urge to buy something just because a celebrity endorses it, but I can see how others might be influenced by the opinion of someone in the spotlight. The question is, does this always have to be a monetary arrangement or if we could harness these influential people for a greater good?

If one were to follow an influencer, why not be influenced in a way that helps us to make the roads safer? For instance, a celebrity could promote the use of seatbelts, child seats or fatigue management instead of a new line of cosmetics. I am sure that a great number of people might listen to a celebrity rather than a politician that is droning on about things. With the high number of followers some influencers have, the reach should be huge. As these messages can be shared, even more people would know about the influencer and the message they have for us.

What I really cannot understand is that some influencers do not seem to consider the consequences when it comes to the portrayal of unsafe situations. Remember the "Kiki Challenge"? To jog your memory, the challenge requires the performer to dance along with a moving car and then jump back into the car. It involves a slow-moving car, with the person jumping out of the car and dancing to the first few lines of Drake's track, 'In My Feelings', on a road mostly in the middle of traffic. If a celebrity does this, live, on camera, it should be ok then, right? This is the thinking that might go through the heads of people that then endanger themselves and others. In such cases I wonder if these celebrities are not thinking about the impact of what they are doing. If you now say, "Yes, but what about movies like Fast and Furious?" There we have notices asking the audience specifically to not try to re-enact these stunts. And it should be understood that this is fiction.

For some bizarre reason, taking videos of oneself in cars is a thing. Maybe that is a format that portrays action and being busy, I don't know. What I can observe is that many people shooting videos in driving cars do not seem to care about the subliminal message they are sending by not using a seatbelt and focusing on delivering content for their channel or Facebook. I see mothers with kids in the car, talking about road trips. To my shock and horror, in many cases the passengers, or even the driver, is not wearing a seatbelt. For me, my parents had a huge influence on my upbringing. I would be upset to know that they had put me in harms way for the sake of some likes. Besides, not using a seatbelt is an offence that these drivers and passengers are publicly broadcasting.

Driving under the influence typically infers negative influence. However, if those having the power to steer people would take time to re-direct their effort, they could change people's behaviour. If there is a connection between celebrity status and the fact that people follow the advice of such people, there could be a lot we can achieve by making use of social media. And if we are all influencers, even for one day, by showing off how we ensure that we all can improve road safety, we could have a huge impact. 



Volvo Trucks' new Volvo FM model has won the Red Dot Award 2021 in the Product Design category for commercial vehicles. The new Volvo FM has been designed with an uncompromising purpose: To be the optimal work tool for a wide range of transport assignment, with the driver always the primary focus.

The distinction "Red Dot" has become established internationally as one of the most sought-after seals of quality for good design. The award competition started at Design Zentrum Nordrhein Westfalen in Essen, Germany back in 1955. Today's Red Dot Jury comprises some 50 international experts.

Volvo Trucks Wins Award for Outstanding Design Quality of its New Volvo FM Model

The development of the new Volvo FM followed extensive surveys and customer interviews which confirmed the importance of the driver's contribution to transport companies' profitability and image. The design team therefore set out to design the best mobile office in the industry, resulting in a versatile truck that is agile, spacious, and most importantly safe and comfortable for all drivers.

"The Red Dot award is a great acknowledgement of the creative work of the Volvo Trucks design team. The award highlights a well-balanced Volvo FM, creating business value with this desirable truck. By purposeful design of the Exterior, Interior and User Experience, we are improving the daily lives of our drivers and keep our society running," says Carin Larsson, Volvo Trucks Chief Designer UX. 



DAF Introduces Charging Stations for Electric Vehicles

DAF Trucks offers a full range of fixed charging stations with power levels from 20 kW up to 360 kW. In addition, to provide maximum flexibility, mobile chargers with power levels from 24 kW up to 40 kW are available.

The 20 kW to 50 kW PACCAR chargers support the daily operations of an individual truck that can be charged during the evening or at night. Designed for convenient fast charging, the 120 kW and 180 kW PACCAR chargers are perfectly suited for fleets operating electric vehicles on multiple routes or in multiple shifts. The 180 kW unit provides the power to charge most truck

types in less than three hours. The most powerful version is the 350 kW PACCAR charger, an ultra-fast solution that can charge vehicles at full rated power in less than two hours or fast charge two vehicles simultaneously. Mobile chargers are ideal for road side assistance or in workshops, where maximum flexibility is needed in the charging infrastructure.

The integration with the DAF fully electric trucks, the charging hardware and the network software is being taken care of by DAF and its partners, who have up to ten years of experience in the advanced charging industry. Where needed, the partners will conduct site assessments, energy modelling and engineering at the customers premises. They will also maintain the charging equipment. This ensures a flawless communication between the trucks and the chargers.

Customers can purchase the PACCAR chargers from DAF dealers and TRP store locations. The complete range of electric vehicle charging stations is backed by a two-year warranty. 



IVECO Extends Eurocargo range with new 18.5-Tonne model for Taiwanese market

IVECO presented the Supercargo 18.5T at Commercial Vehicle Exhibition in Taichung City. The new vehicle combines all the advantages of the Eurocargo range with the benefits of a higher payload.

Prospire International Corp, the authorized importer and distributor of IVECO Heavy Duty Truck in Taiwan, is present at the Commercial Vehicle Exhibition (CV News), which is being held at the

Taichung International Exhibition Center from 14-18 April. On the 288-square meter IVECO stand in Exhibition Hall No.1, Section 3, it showcased the Eurocargo models currently available in the Taiwanese market. Three vehicles were on display:

A Supercargo, ML 180: with a Gross Vehicle Weight (GVW) of 18.5 tonnes, the ML 180 offers the benefits of higher payloads, outstanding performance, great maneuverability, and market-leading ergonomics and comfort. It is equipped with a Euro VI-D Tector six-cylinder 6.7-litre diesel engine, which delivers 320 hp maximum power, and a choice of 9-speed manual or 12-speed automated gearbox.

The Eurocargo: The truck the city likes

Medium range vehicles are mainly used for missions such as urban distribution and municipal services: this is why IVECO has set performance improvement and fuel consumption reduction as a top priority. With the FPT engines, 15 to 18.5 tonnes of GVW, the Eurotronic and Alison transmissions, the HI-SCR system with passive diesel particulate filter (DPF), and Advanced Driving Assistance Systems such as the Lane Departure Warning System (LDWS), Advanced Emergency Braking System (AEBS) and Adaptive Cruise Control (ACC), the Eurocargo is the truck the city likes. 

SANY is involved in the South Muttrah New City project in Kuwait

Some 40 kilometres northwest of the city Kuwait on the Arabian Peninsula, on a stretch of no man's land that used to be covered in sand and blown by winds, a new modern city is on the rise.

Smack in the middle of the dessert, the city being built is one of the key livelihood projects that is part of China's global infrastructure development strategy "One belt and One road". There are 20 units of SANY truck-tractors and other machines currently involved in the construction project.

The heavy trucks are mainly used for material transportation on a route where part of it goes through road-less dessert. This severe road condition brings about challenges including extreme heat (60°C) and sandstorms. Almost one year into the project, with a total safe travelling record of over 1 000, 000 kilometres, these SANY machines have a great reputation among the

drivers whose compliments are mainly centred around the "robust chassis, powerful engine, smooth shifting and effective braking". They are also impressed by the comfort designed into the cab which features air-bag shock-absorbing seats and a quick-cooling air conditioning system.

Equipped with a Weichai 500 horse-power engine, a FAST Sixteen-speed gear box and a 16t Hande axle, the truck deserves its title: heavy truck-tractor. In the near future, other soon-to-be-realized adaptations on customer's demands include spare tire quick-installation mechanism, independent air inlet and independent and movable trailer plate which ensures the optimum climate adaptability of the machines. For this batch of trucks in Kuwait, SANY's maintenance policy covers a two-year warranty plus three-year renewal on the engines, during which period spare parts are included. 

From Diesel to Hydrogen: MAHLE Opens New Test Center in Stuttgart



MAHLE has put a new test center for hydrogen applications into operation on a 1,400-square-metre site in Stuttgart, Germany. The company has invested around EUR 2 million in the new facility, further expansion being planned. The rigs will be used to test components for fuel cells

and close to zero-emissions engines running on hydrogen in order to develop economical and robust system solutions for the automotive industry.

MAHLE traditionally has strong expertise in the areas of air management, filtration, thermal

management, and power electronics. Around 100 employees are working on hydrogen-related projects at the technology group's location in Stuttgart. MAHLE has been a supplier for fuel cell vehicles since more than ten years. "Our new hydrogen test center is an important step and another example of a successful transformation project by MAHLE," says Dr. Martin Berger, Vice President Corporate Research and Advanced Engineering at MAHLE. "After all, testing at this location was so far linked to combustion engines only." The test center's activities will focus on developing drive systems and components for heavy-duty commercial vehicles. MAHLE believes that hydrogen in fuel cells and combustion engines is an important contribution to sustainable transportation.

With this new test center, Stuttgart-based automotive supplier MAHLE is strengthening its research and development activities in this field. As a member Page 2 of 2 of the Hydrogen Council, MAHLE also campaigns at political level for the promotion of hydrogen technology. The Hydrogen Council is a global initiative consisting of leading energy, transport, and industrial companies and advocates hydrogen as an essential element towards decarbonization of the entire global economy. 

Weststar opens 3S Centre in Juru Auto City

Weststar Maxus Sdn Bhd, the sole distributor of MAXUS vehicles in Malaysia, continues to expand its 3S centres (sales, after sales and spare parts) with the opening in Juru Auto City.

The new facility opens up seven service bays and is located at Lot 1810 & 1811, Jalan Perusahaan Auto City, North-South Highway, Juru Interchange in Prai, Penang. Endorsed as a tourist destination by the Penang State Government, Juru Auto City has become a landmark as a 1-Stop for Auto, Food, Entertainment, Banking, Shopping, and Outdoor events/celebrations. 

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Cevat Kont – Director – is based in Rotterdam and speaks, English, Dutch, Turkish, German & French – cevat@truck-refrigeration.com

Paul McMahon – Director – is based in Scotland and speaks English (quite well for a Scottish guy) & Spanish – paul@truck-refrigeration.com

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