



ATR World



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Leading Malaysian aftermarket spare parts wholesaler joins ATR

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Dear readers



Hello and welcome to this the second edition of ATR World in 2021. In this issue we are pleased to welcome our newest member from the Asia Pacific region, Rimbunan Kuasa Sdn Bhd. The Malaysian based Rimbunan Kuasa Sdn Bhd joins ATR with effect from 1 July 2021, further expanding the ATR presence in the Asia Pacific Region and is a direct result of the establishment of our APAC office in Singapore in 2020.

Founded in 1996, Rimbunan Kuasa Sdn Bhd is today a leading automotive aftermarket distributor in Malaysia supplying automotive spare parts to over 4,000 individual customers and workshops, focusing primarily on European automotive brands.

We are excited to welcome them into the ATR family and look forward to a fruitful collaboration in the future. Please refer to pages 8 and 9 for further information.

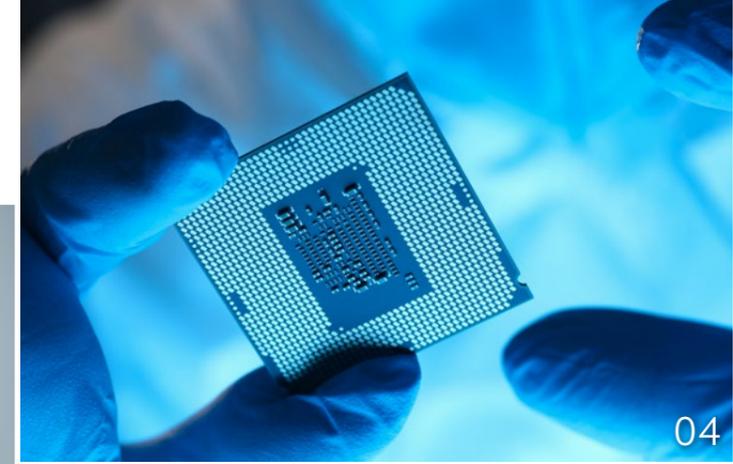
From the new to the older, I would like to draw your attention to one of our long-standing shareholders, KGK in Sweden who is celebrating their 75th anniversary this year in 2021. Read more about the KGK journey on page 11.

The shareholders of ATR International AG traditionally meet once a year to hold the Annual General Meeting at which the Annual Financial Statements are reviewed, new shareholders are introduced, and market trends and strategies are discussed. Unfortunately, due to COVID and the related restrictions imposed on travel throughout the world the meeting had to again be held without physical presence of all shareholders and took place recently on 13 July. A summary of the event can be found on page 10.

In the Industry section you can find an article about semiconductor shortages. We conclude this issue with the subject of commuter habits in post pandemic times.

Finally, we would like to draw your attention to several virtual networking and collaboration opportunities that are being scheduled in the various regions. With the postponement of Automechanika these virtual events may assist with maintaining a close contact with your key partner suppliers. Read more about these events on page 10.

Warren Espinoza
CEO, ATR International AG



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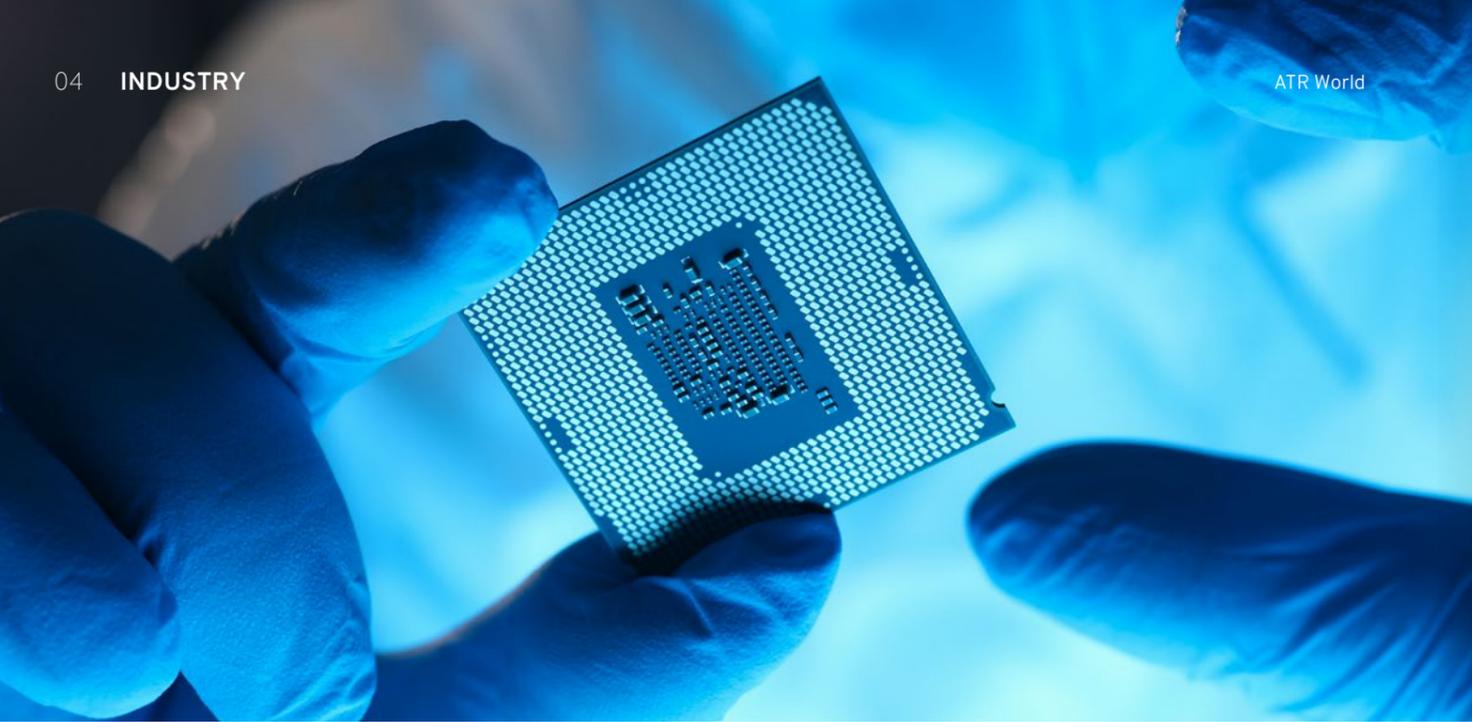
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Semiconductors: a contentious supply chain shortage and the ripple effect on the automotive industry

The COVID-19 pandemic, geopolitical tensions, and a raw material shortage, among other things, have resulted in a global semiconductor supply chain shortage causing automotive OEMs to take drastic measures.

Recent automotive innovation has largely been possible thanks, in part, to the rise of semiconductors. In fact, semiconductors have enabled many recent innovations in automotive technology to take shape, including vision-based, enhanced graphics processing units (GPUs) in addition to application processors, sensors, and DRAM and NAND flash.¹ Many semiconductor companies have pursued automotive opportunities, forming partnerships throughout the value chain, as demand for automotive semiconductors has continuously increased.² However, the automotive industry has now been hit with semiconductor supply chain shortages, causing some OEMs to shut down production lines and cut targets.

A combination of factors has resulted in the worldwide shortages. Fluctuations in automotive industry purchasing power of semiconductors in 2020 (as a result of COVID-19) and high demand from other industries have, in part, led to capacity constraints at semiconductor manufacturers.³ Additionally, the shortage of raw material (silicon) and geopolitical tensions between China and the United States could put European manufacturers in danger of being reliant on Asian production.⁴ So, what does this mean for an industry that is already faced with challenges to recuperate COVID-related losses?

The current situation

All major OEMs are affected by the shortage. Japanese carmakers Honda, Nissan,

and Toyota are all reviewing production targets.⁵ General Motors extended factory shutdowns into March, while Ford said production in Q1 of 2021 would fall by 10-20% from their original plan.⁶ Global manufacturers were said to produce 672,000 fewer light vehicles in Q1,⁷ and Germany's Daimler and Volkswagen have put thousands of employees on short-time work as a direct result of the bottlenecks.⁸

And while automotive companies make up a fraction of worldwide semiconductor sales – just 3% of Taiwan Semiconductor Manufacturing Company's Q4 2020 revenue, for example – the shortage has resulted in a diminishing supply of microcontroller units (MCUs) that are used in electronic control units (ECUs) throughout vehicles, from the engine and transmission to air-

bags and doors.⁹ It is a multi-layered issue but, with the automotive industry heavily reliant on externally-produced semiconductors for their innovative development, it is essential that the supply chain works. As of now, there is no over-night fix for a system that has reached its limit, leaving the automotive industry in an incredibly precarious situation.

What does this mean for automotive suppliers?

As the COVID-19 pandemic progressed through 2020, automakers fortunately saw sales volumes that didn't decline nearly as much as people feared, rebounding close to pre-pandemic levels as dealerships were able to open up under specific parameters. However, as automakers began to accrue orders again, it was clear that procuring vital technological components (i.e. semiconductors) was going to present serious challenges.¹⁰ Many of the biggest automotive parts suppliers are closely monitoring the situation and have even set up task forces to monitor and minimise impact, providing customers with regular updates on production and delivery schedules.¹¹ Additionally, suppliers including Continental, for example, are looking at alternative sourcing and production options to maintain a certain level of semiconductor output from manufacturers.¹²

The way forward may look different

It is clear that car buyers are interested in the latest connectivity features, though particularly important in certain countries over others. 62% of Chinese buyers have stated they are willing to shift to a brand-new vehicle in order to obtain the latest features, while 37% of American and 25% of German buyers had the same mentality.¹³

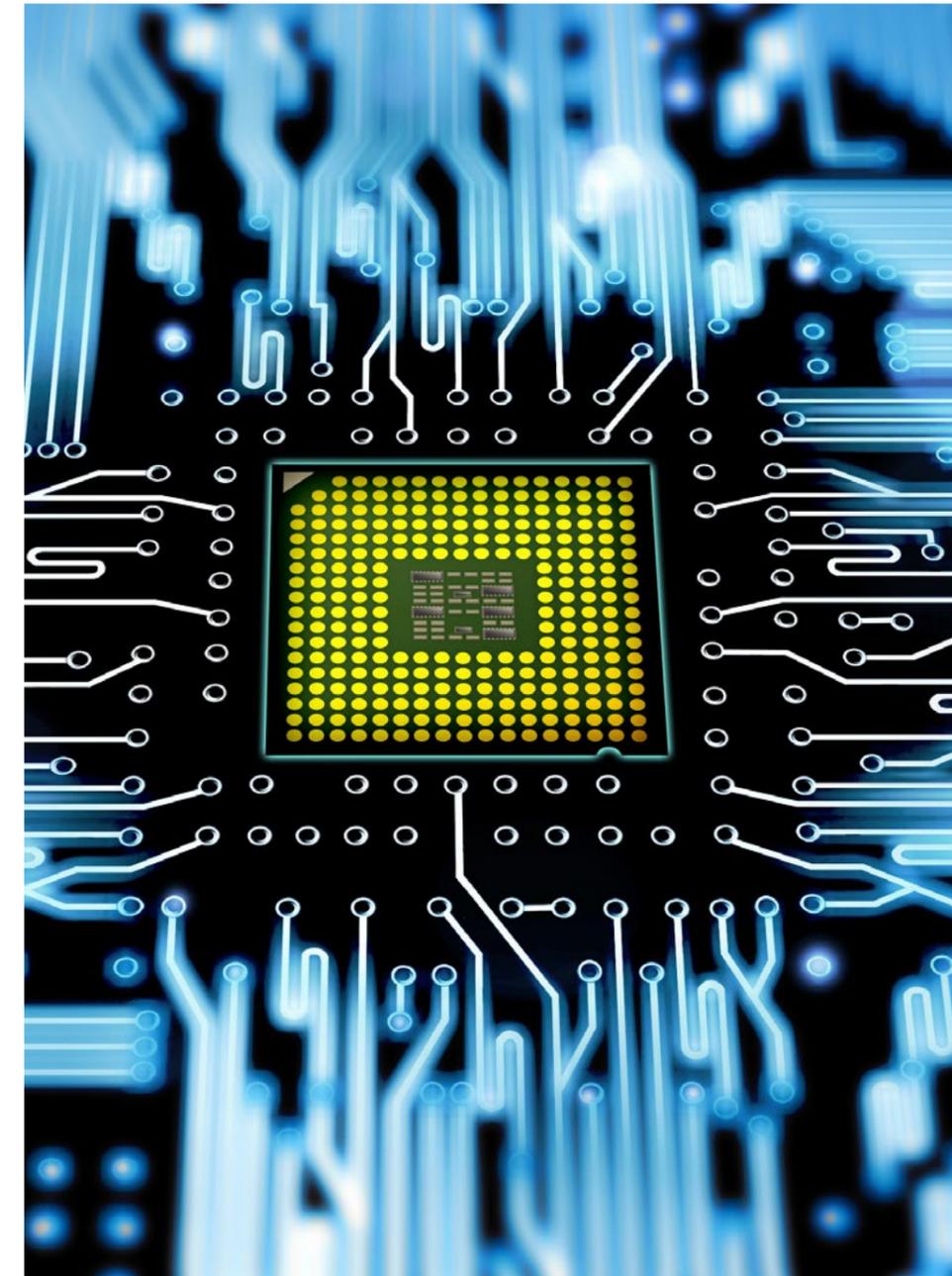
There is no doubt that innovation is vital to the automotive industry as a whole; this, inherently, adds pressure to an already-complex and competitive industry. Meeting customer needs while remaining ambitious is always top of mind. With the multi-layered issues at play, the automotive industry has rarely experienced so many disruptions simultaneously,¹⁴ but

such challenges could bring opportunities to those willing to invest and think differently.

To combat such challenges in the future, automotive OEMs may want to explore a more diversified, independent approach for semiconductor manufacturing capabilities to avoid placing such heavy reliance on global, yet regionally-dependent, supply chains.

KEY FACTS

The COVID-19 pandemic has exposed a fragmented semiconductor supply chain. The time is now for the automotive industry to take control.



¹ Mobility trends: What's ahead for automotive semiconductors. McKinsey & Company. Stefan Burghardt, Seunghyuk Choi, and Florian Weig. April 2017. ² Ibid. ³ Semiconductor shortage will hit auto industry well into 2021. Marcus Williams. 19 January 2021. ⁴ Semiconductor supply bottlenecks: The power of microchips. Deutschlandfunk. Silke Hahne. 22 February 2021. ⁵ Semiconductor shortage will hit auto industry well into 2021. Marcus Williams. 19 January 2021. ⁶ Why the automotive supply chain is in a semiconductor jam. Matt Leonard. Supply Chain Dive. 23 February 2021. ⁷ Ibid. ⁸ Lack of semiconductors: short-time working for thousands of Daimler employees. 21 April 2021. Automobilwoche.de.

⁹ Why the automotive supply chain is in a semiconductor jam. Matt Leonard. Supply Chain Dive. 23 February 2021. ¹⁰ Ibid. ¹¹ Semiconductor shortage will hit auto industry well into 2021. Marcus Williams. 19 January 2021. ¹² Ibid. ¹³ Mobility trends: What's ahead for automotive semiconductors. McKinsey & Company. Stefan Burghardt, Seunghyuk Choi, and Florian Weig. April 2017. ¹⁴ Ibid.

Threat or opportunity?

How car service stations can master the radical transformation

Trends and technologies will permanently change both the automotive industry as well as customers and their expectations. Car service stations will have to reinvent themselves.



Author Enno Däneke

In just ten years, the dominance of private motorised transport and the internal combustion engine could come to an end. Fleets of autonomous electric vehicles will then increasingly dominate the streets. The interaction of electric mobility, connectivity, autonomous driving, and new mobility services holds considerable disruptive potential.

What threats and challenges do car service stations face?

Despite the significantly higher utilisation of vehicles in autonomous fleet systems, the maintenance and repair effort will decrease due to the lower number of vehicles and significantly fewer accidents. In addition,

electrification will make vehicles less susceptible to maintenance and repair than they are today.

The industry faces the threat of lower sales, garage closures, and a massive drop in employment. At the same time, the new technologies will require new skills from employees. Junior staff will have to be trained accordingly. Customers' need for advice will also change. And access to them will increasingly come through digital interfaces. It is still completely uncertain who will dominate these interfaces in the future or who will own the rapidly growing volume of data. The car manufacturers? Fleet operators? Software giants? Or the new intermediaries of the platform economy?

But even in the face of this scenario, which seems bleak at first glance, there are opportunities for car service stations.

When markets undergo radical change, there are always winners and losers. The winners will be those who align their business model with the new reality at an early stage in order to secure new revenue potential for their company. In the future, car service stations could develop into digital maintenance service providers or robotaxi service stations.

Digital maintenance service providers

Scenario: The car becomes a digital gadget. Digital interfaces to vehicles and customers enable new services.

With the help of intelligent prediction models (predictive maintenance) that forecast the wear and tear of components and technical problems, car service stations can increase customer satisfaction by eliminating more expensive repairs and longer vehicle downtimes. Smart as-

sistance functions offer immediate help with questions and problems. By way of augmented reality applications, workshop employees support a growing number of DIY customers regarding updates, the replacement of components or repairs.

Robotaxi service stations

Scenario: Today's vehicle owners are tomorrow's mobility users – they will no longer be customers of car service stations.

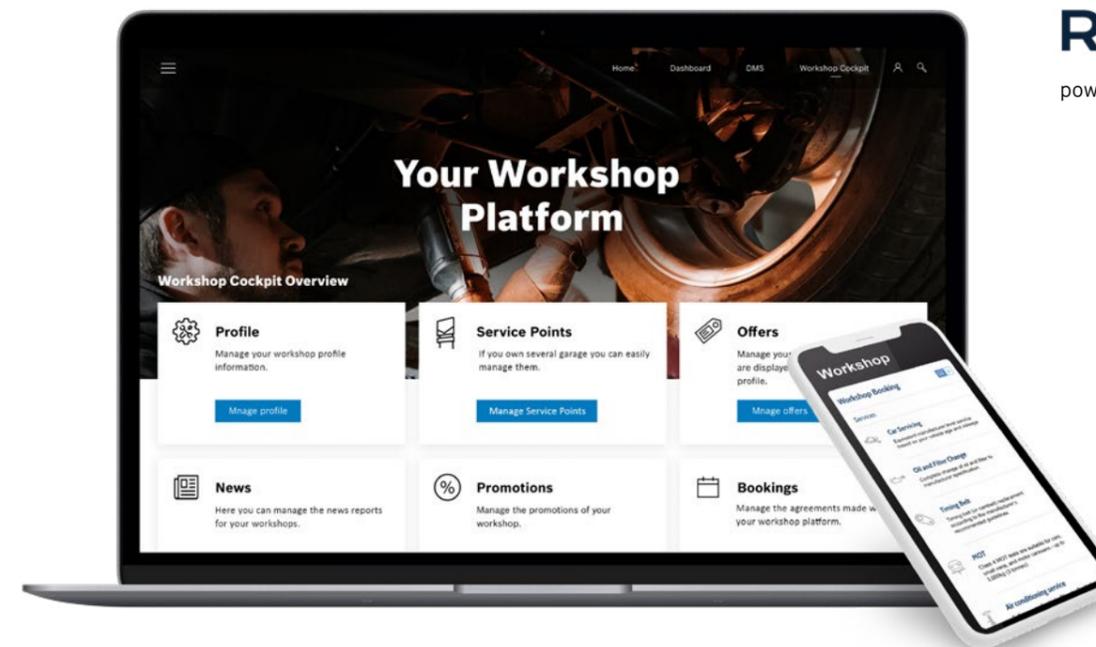
With the spread of autonomous driving, car workshops will have to evolve into fleet service centres. To do this, they should cooperate with manufacturers and fleet operators, who do not necessarily have to be today's brand owners. Core tasks include ensuring operation, providing the charging infrastructure, as well as cleaning and maintaining the autonomous taxi fleets.

Car service stations can use the threats of the new era of mobility to develop opportunities and redefine their vision. This will help them to position themselves robustly for the future – be it through specialisation, new services or the development of new business models.

Only in this way will they succeed in mastering the radical transformation.

KEY FACTS

With the future of mobility changing, car service stations will face increased challenges. They will have to adapt to meet future demands/needs, not just to survive, but to thrive.



Replate
powered by **CARUSO**
dataplace

Replate – The future-oriented online booking system for independent workshops

ATR, Bosch, CARAT, CARUSO, Continental, Global One Automotive, Schaeffler, and ZF jointly launch the industry solution for online appointment bookings for workshops in Europe.



Henning Kaeß

With Replate, the companies present a cost-effective and powerful workshop platform that can be easily integrated into existing solutions. The platform stands for an open industry solution that supports the existing value chain. Part of Replate is a modern customer management system that enables vehicle owners to conveniently book their service appointments

using their smartphones – in almost all European languages. If the vehicle's telematics data is available, the workshop can even create a needs analysis as well as an automated cost estimation in the same booking process. And this regardless of whether the data comes directly from the vehicle or via a dongle. A first dongle provider is currently being connected to the system. These digital contact points enable independent workshops in Europe to increase their customer loyalty and, what's more, mobility providers and fleet operators equally benefit from

“Those who do not have a booking tool in use, or need a new one, can access a whitelabel solution.”

the solution, as they can use the system to direct their vehicles to the respective workshops.

Currently, more customers than ever before are using online sales channels to interact with companies from a wide variety of industries. In line with this customer expectation, independent workshops must be able to offer an end-to-end solution for booking and fully processing a repair and maintenance order.

Not every independent workshop should have to build its own solution. This is exactly where Replate comes into play and is made available to the entire market in the form of an industry solution – operated by Caruso GmbH.

In addition, the initiative is open to participation by other trade groups and manufacturers and gives each of the concept providers the opportunity to operate the online booking system under their own branding.

Further information is available via <https://www.caruso-dataplace.com/replate/> or directly from ATR at digitisation@atr.de.

KEY FACTS

ATR and some of its industry partners have band together to launch Replate, a digital, industry solution for workshop appointment bookings.

Leading automotive spare parts wholesaler in Malaysia joins the ATR family



Established in 1996, Rimbunan Kuasa Sdn Bhd has grown to become a regional powerhouse.

Rimbunan Kuasa Sdn Bhd was established by the Tan family in 1996. It all started off with a double storey retail shop in Petaling Jaya – one of the major cities located in Selangor, which is also the economic powerhouse of Malaysia. The Tan family had a humble goal of providing genuine, high-quality automotive parts in the country. Maintaining quality service, product range, and availability has been the key to their customer satisfaction, which attracts more and more customers from other cities. That was when the company saw the opportunity to expand in order to meet market demand. Within the next five years, Rimbunan Kuasa expanded to

set up four more branch outlets throughout the Klang Valley region. Soon after the fifth branch was established, Rimbunan Kuasa felt the need for a separate central hub that mainly focuses on stock warehousing and distribution to branches. Their first warehouse was a corner shop in Subang that measured only 930 m². As the business grew, so did their warehouse – it was upgraded from the corner shop warehouse to a proper warehouse in Subang (3,900 m²) and, currently, to their warehouse in Bukit Jelutong, Shah Alam. More than 60,000 SKUs are stored in the 8,094 m² warehouse. Today, Rimbunan Kuasa is the leading automotive spare parts wholesaler in

KEY FACTS
 With a solid footprint in Malaysia already, Rimbunan Kuasa looks to their ATR partnership as an opportunity to expand globally.

Malaysia, holding more than 30 prestigious brands' authorised distributorships in the automotive aftermarket industry, allowing the Company to offer competitive prices for a wide range of quality products and services. Furthermore, with 20 branches established nationwide, obtaining genuine auto spare parts in Malaysia is within reach. Being a reputable company in this industry, Rimbunan Kuasa is also able to provide hassle-free after-sales services to its growing customer base.



Warehouse in Shah Alam, Selangor, Malaysia.



BIMMERIANZ - Bimmer Auto Club 2019.

In the recent years, the Company has been actively participating in various programmes at local automotive exhibitor events. By doing so, they can create better awareness for their brand and in using genuine automotive spare parts. At the same time, the Company is able to introduce both OE and aftermarket brands to the public.

Rimbunan Kuasa is also a strong believer in employees being a vital asset to the Company. For this reason, the Company always strives to provide a conducive working environment for its talents as well as organising various training programmes to keep its employees motivated and up-to-date with the latest skills and knowledge required in today's technologically-driven world. To date, Rimbunan Kuasa has collaborated with various suppliers and provided automotive parts-related training to employees.

Also, being a member of Malaysia's Human Resource Development Corporation – an organisation that aspires to upskill the Malaysian workforce – Rimbunan Kuasa commits themselves to provide their employees with courses which focus on developing their skillset.

Without its customers, Rimbunan Kuasa would not be where it stands today. Hence, the Company also engages in the Dealership Appreciation Programme on a yearly basis, in order to enhance its relationship with customers, and also to show its appreciation for their loyalty and support, some of which have been with the Company since the beginning.

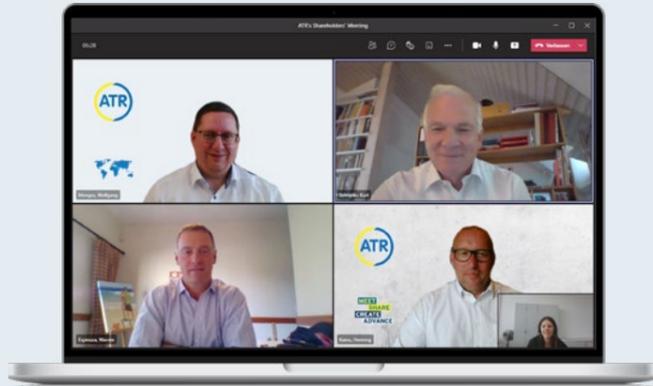
Together with ATR, Rimbunan Kuasa believes that it can strengthen their marketing position by having more opportunities for strategic networking and access to exchanges on the latest market information among ATR family members and



Product Training.

suppliers. Rimbunan Kuasa also hopes that this partnership will allow them to further strengthen their position in Malaysia and expand their reach to cover the international market, enabling them to explore the countless opportunities available globally. With that, the Company can continue with the Tan's family vision of being one of the leading automotive car parts suppliers for many years to come.

A successful online reunion for the 31st Annual General Meeting



From upper left to lower right: Wolfgang Menges (ATR), Kurt Schnyder (SAG), Warren Espinoza, Henning Kaeß, Linda Briem (all ATR)

Unfortunately, due to COVID and the related restrictions imposed on travel throughout the world the annual Shareholder's Meeting had to again be held without physical presence of all shareholders. Two online informative meetings were held on 22 June and the formal Annual General Meeting was held on the 13 July 2021.

In the informative meetings, the Management Board of ATR International AG presented the business report on the past business year, which all things considered was a positive one despite the challenging times experienced in the global automotive sector. ATR's sales turnover reached a new record with 27.7 billion euros in 2020.

Furthermore, ATR strengthened its network with two new shareholders: Digraph Transport Supplies Ltd, a leading truck specialist in the UK which joined ATR in January 2021 and Rimbunan Kuasa Sdn Bhd, one of the leading distributors of European automotive parts in Malaysia who joined in July 2021. Once again, we welcome them into the ATR family. To further focus on the commercial vehicle market, ATR has established a Steering Committee to drive future initiatives in this sector.

ATR's local representatives in Latin America and Asia Pacific have settled and have provided valuable insights and support to the ATR team and the local shareholders in an efficient way. Both teams regularly held online conferences with the local ATR shareholders and suppliers to enhance communication and strengthen business relations. More online events and webinars are planned in both Latin America and in the APAC regions this year.

At the beginning of 2021, ATR founded the company ATR Digitisation GmbH to further expand the competence in the field of telematics and digitisation. Over the last three years, ATR and its partners, have been working on a digital IAM solution for workshops called "Repdata" which was launched in April 2021. Furthermore, the CARUSO Connected Vehicle Field Test held in

2020 was a great success, with the second field test to be launched shortly.

Realising that with COVID and the related global travel restrictions, in person meetings will not be possible for many of our shareholders and that Automechanika in its original form has been postponed to 2022, ATR has scheduled two online IPAS events for later this year to facilitate focussed interaction between our shareholders and our IPAS suppliers. ATR will not participate in this year's Automechanika 2021 Digital Plus event, but will host two IPAS online events, the first in the LatAm region to be held from 22-24 September 2021, followed by the MEA event scheduled for 18-20 October 2021. It is really hoped that in person meetings can return in 2022 and to this end the next Shareholders' Meeting has been planned to take place from the 9-12 June 2022.

APAC Supplier Day 18-20 May

The second ATR APAC web conference was organised for our APAC Shareholders with IPAS partners Valeo and NGK-NTK. The web conference, attended by more than 60 people took place on 18-20 May 2021. Keynotespeaker Simon-Kucher & Partners kicked off proceedings by sharing interesting insights into current commercial trends within the IAM. Following this, a general session was held before breakaway meetings took place to discuss the local needs of ATR shareholders. This APAC-focused web conference is an example of ATR's strategy to invest in a robust regional structure. With local representation, ATR is and will be able to specifically identify and address local industry issues, within the ATR global guidelines but executing based on local realities.



Vincent Tan (ATR), Alexander Birnstein (ATR)

The web conference was well received and considered to be a great success with similar events planned for the future together with our IPAS partners.

Vincent Tan from ATR APAC can be contacted for more information: apac@atr.de.

KGK turns 75 this year



KGK is celebrating the 75th anniversary of when Knut-Göran Knutsson established KGK. From a German two-stroke engine to today's high-tech electric cars, the focus has always been on helping people to move forward.

KEY FACTS

KGK continues to grow and adapt to the market while benefiting manufacturers, citizens, and the planet.

In 1946, all it took was a handshake. And so, Knut-Göran began his partnership with Hella (or Westfälische Metall Industrie GmbH, as it was then known) – a partnership that endures to this day. There have also been many others, including ZF and VDO. Today, KGK's product offering includes everything from cars and caravans to contracts, buses, trucks, and boats.

The current owner, Knut-Göran's son Håkan Knutsson, was just one year old when it all began. However, he clearly remembers the early years and his youthful interest in his father's work.

"We had many fascinating discussions around the dinner table during my childhood," Håkan recalls. "Taking over the business in 1974 was a natural step for me. I wanted to continue in my father's footsteps."

Since 1946, the in-

dustry has undergone dramatic changes – with many different challenges as a result. Sweden has switched to driving on the right, and new fuels and electrification have transformed the market. KGK has remained at the cutting edge, thanks to smart new solutions such as the Swedish market's first headlight for driving on the right. Today, continuing to help people move forward without placing excessive demands on the Earth's resources is a key challenge.

"By working systematically with sustainability, we are convinced that we can help transform Swedish transport in a way that benefits manufacturers, citizens, and the planet," explains CEO Johan Regefalk. "That's why we work with initiatives relating to electric vehicles, educate the industry on high voltage technology, offer electric car

charging solutions, and keep developing our range of parts for electric cars. At the same time, we also ensure that we look after existing vehicle fleets in a sustainable way via our customers and suppliers."

Throughout the years, there has always been a focus on doing business that benefits all parties involved. This approach has resulted in long-term cooperation and partnerships.

"I would like to thank our customers and suppliers for our fantastic cooperation over the years, and I hope that this cooperation will continue for many years to come," adds Johan.



Johan Regefalk, CEO. Sebastian Ekberg, Photographer




Martaş Automotive joins Ford's authorized spare parts dealer distribution network!

Martaş Automotive, one of Turkey's most established automotive spare parts distribution brands, continues to strengthen its nationwide distribution network with new collaborations.

GREAT MEETING!





In this context, the company joined the authorized spare parts dealer network of the company in Turkey following the agreement it made with Ford Otosan. Erdem Çarıkcı, General Manager of Martaş Automotive, made a statement on the subject: "Today's spare parts world has become more complex administratively with the increasing number of models and

thousands of different parts. The demanded service time to reach the part is decreasing day by day, prompting companies to further strengthen their distribution networks. This cooperation will ensure that Ford Otosan products reach every point of our country as soon as possible, with the strong sales and distribution network of Martaş Automotive, and

will create new business opportunities for Martaş Automotive in the sector."

Martaş Automotive, which has left behind 40 years in the automotive after-sales sector and carries out the sales, marketing and distribution operations of more than 150 domestic and foreign brands operating in different product groups, started to attack for new collaborations in 2021, which it started with investments. In this context, the company aims to further strengthen its distribution network in Turkey with the cooperation it has implemented with Ford Otosan. After the agreement with Ford Otosan, Martaş Automotive joined the company's authorized spare parts dealer network in Turkey. Along with this cooperation, Martaş Automotive started distribution by obtaining a direct dealership from an original equipment supplier (OES) for the first time, breaking new ground in its history.

"We believe that there is a great synergy after this cooperation"

Making statements about the cooperation

with Ford Otosan, Martaş Automotive General Manager Erdem Çarıkcı drew attention to the importance of the agreement between the two companies. He said, "Martaş Automotive has now joined Ford Otosan's authorized spare parts dealer network in Turkey. We believe that there has been a great synergy when Ford Otosan, one of the largest vehicle manufacturers in the world and in Turkey, chose Martaş Automotive, which has the most effective and widespread sales and distribution network in our country, as its business partner. The automotive market is growing and developing day by day. Today's spare parts world has become more complex administratively with the increasing number of models and thousands of different parts. The demanded service time to reach the part is decreasing

day by day, prompting companies to further strengthen their distribution networks. This partnership will ensure that Ford Otosan products reach every point of our country as soon as possible with the strong sales and distribution network of Martaş Automotive, and it will also create new business opportunities for Martaş Automotive within the sector. While thanking the Ford Family for their trust in us, I wish the cooperation to be beneficial for both companies."

Martaş Automotive is on a digital platform with Nar Parçası!

Martaş Automotive makes its mark now on a digital platform with its new business partnership with Nar Parçası gift platform. Nar Parçası's gift platform opens the gates of a joyful world of opportunities and advantages to more than 4,500 customers of Martaş Automotive! In addition, offering a social platform network to the customers of Martaş Automotive, Nar Parçası is already liked.

Martaş Automotive has taken another step towards a significant innovation under its digitalization program. Having the opportunity to come together with its customers on a joyful platform with advantages and opportunities by the business partnership with Nar Parçası gift platform, Martaş Automotive enables more than 4,500 customers across Turkey to use their points they have gained through the B2B system to buy thousands of products of hundreds of brands in the advantageous world of Nar Parçası.

KEY FACTS

Joining Ford Otosan's spare parts dealer distribution network, Martaş Automotive also offers its customers a new purchasing experience with the Nar Parçası digital gift platform.

Customers of Martaş Automotive can select and order from and thousands of products from various brand options in a great variety of fields from electronics to major appliances, from personal care products to textile, using the Gift Catalogue on the Nar Parçası platform. In addition, they can order the textile products with Votto, MGA, and GRAT logos on the Gift Catalogue and use them in their workplaces.

Besides, customers of Martaş Automotive can use the gift and discount cheques of many brands in various categories on the Opportunities Club on the Nar Parçası platform without any limits and for free, and they can use these cheques both for themselves and their families and loved ones as they wish.

Customers of Martaş Automotive have a pleasant shopping journey with hundreds of brands on the Gift Catalogue and Opportunities Club on the Nar Parçası platform and have a social platform experience with various modules such as surveys on the platform.

Customer Loyalty Program

NAR PARÇASI



Tmall AutoCare: Building the 'Future Workshop' of world



New CARZONE and Tmall have joined forces to create an end-to-end service solution for the automotive aftermarket.

The collaboration connects the power of CARZONE's offline supply chain with Alibaba's Tmall online business to create the first fully integrated solution for the aftermarket. CARZONE has been in business since 1995 connecting products and brands to over 200,000 garages across China. Tmall is one of the largest worldwide platforms with over 750mil consumers. These two businesses have now joined forces to be the latest industry for Alibaba's vision called New Retail. New Retail extended from online-only or offline-only into a seamless omnichannel consumer experience that is fully integrated and data driven. Tmall and New CARZONE put the Tmall AutoCare Garage at the centre. The Tmall AutoCare garage meets the automotive needs of products, services, and consumers.

Tmall AutoCare is built with the garage at the centre. The goal is to create profitable garages and a place of trust for end consumers. The plan is to have more than 3,000 Tmall AutoCare garages by the end of 2021. The Tmall AutoCare Garage is a data-driven franchise garage model that connects CARZONE's efficient supply chain to the Tmall online auto platform. In the first half of 2021, more than 17,000 garages have signed a letter of intent to utilise the Tmall AutoCare franchise busi-

ness model in China. Through a strict selection model more than 900 stores were chosen to start the first rounds of execution. In Q1 of 2021, the first 500 garages have been in operation. Tmall AutoCare garages are being systematically expanded nationwide across China. The first phase utilises the most effective systems that will connect the CARZONE products to the Tmall AutoCare garage in a true partnership model and backed by a full warranty for the end consumer. This creates profitability for the garage and trusted place for auto services for end consumers.

What is Tmall AutoCare?

As we all know, the most significant need of consumers in the aftermarket is a trusted place for services. Aftermarket ecosystems are disconnected from products, suppliers, local distributors, retailers, digital services, and garages. This causes many inefficiencies in the aftermarket for the garages and end consumers that lead to dissatisfaction. Tmall AutoCare is the inevitable future of the aftermarket. New CARZONE and Tmall AutoCare garage connect all of these segments together under one efficient auto ecosystem delivering trusted solutions for the end consumer. Tmall AutoCare

full-service solutions create a win-win model for garages and end consumers.

What has made Tmall AutoCare expand so fast?

As mentioned before, New CARZONE is a professional integrated service solution provider rooted in the traditional aftermarket for more than 25 years with a reputation of trust in the industry. When Tmall AutoCare was created, the natural differentiation was to utilise CARZONE's trusted supply chain capability and Alibaba's online expertise. As Professor Ming Zeng of Alibaba Hupan University proposed, "The core of B2B2C model is supply chain capability. The market needs a platform which could provide parts to independent garages, meanwhile, partner with garages to provide services to consumers together. Responsibility of New Retail is to ensure the entire aftermarket ecosystem runs seamless for the customer."

KEY FACTS

CARZONE and Alibaba's Tmall introduce Tmall AutoCare, bringing a new face to the automotive repair market in China.



Standardize - Tmall/New New CARZONE plans the garage location, size, bay types, equipment, and waiting room.

Tmall AutoCare's support of Alibaba Group ensures there is a deep support for digitised capabilities. In addition, many years ago New CARZONE understood the garage needed a digital support system. So, they acquired and merged a company called F6 which is a SAAS system provider for garage management. The F6 SAAS system includes multiple modules to help improve garage operations, such as garage performance dashboard, technical repair information, all parts purchasing system, customer CRM, and marketing tools. The F6 Mobile system is the most preferred system that is installed in more than 15,000 garages across China. The F6 system is the perfect digital connection for CARZONE's efficient supply chain and the Tmall online business for the Tmall AutoCare garages.

Tmall AutoCare's philosophy is 'Standardize, Transparency, Warranty'. Tmall AutoCare's standardisation starts with determining the best locations, type of service bays, equipment, and size of the garage to support the local market. Once the garage is in operation, F6 is used to ensure standardised services. Transparency is supported in the F6 customer CRM, which allows consumers to watch in real time as services are being performed. Finally, all the services and products are backed by one of the best warranties in the business. This allows the Tmall AutoCare garages to provide trusted and worry-free services.

Last but not least, Tmall's online flagship platform brings in new consumers from online to offline. This is paving the way for consumers to see a true om-

ni-channel solution for automotive services. The Tmall AutoCare garages benefit from new consumers and the end consumer can schedule and get trusted auto services seamlessly.

The future is very bright for Tmall AutoCare garages with a successful partnership model improving garages profitability and ensures end consumers' trust.

The Tmall AutoCare garage is just the start of possibilities for all things automotive. In the future, new services can be easily expanded to auto sales, insurance, parking, fuel, NEV services, and all things related to transportation. In addition, there are opportunities to expand these solutions worldwide with the right local partners.



F6 Garage Owner Dashboard example.



Transparency - Every job can be watched in real time on the Tmall app.





LKQ Europe is driving its sustainability commitment forward

LKQ Europe’s sustainability agenda aims to reduce CO₂ emissions and help its employees develop and engage with the communities in which they work.

As an essential part of its corporate strategy, LKQ Europe is engaging in sustainability projects that will have a positive impact on its customers, employees, and the environment. Specifically, when it comes to climate and environmental impacts, people development, society, and the communities in which it operates. LKQ is committed to reducing CO₂ emissions and making its contribution to meeting the targets of the Paris Agreement.

“As we strive for future profitable growth and continued success, we are

committed to contributing to sustainable development by taking our social and ecological responsibilities seriously,” said Arnd Franz, CEO of LKQ Europe. “With respect to environmental aspects within our operations, our aim is to be among the most progressive companies in the European Automotive Aftermarket. We also involve our partners in our efforts to improve our performance with regard to protecting environment and society, and encourage them to meet high sustainability standards.”

LKQ Corporation has been an environ-

KEY FACTS

LKQ Corporation, the parent company of LKQ Europe, published its first Sustainability Report in April.

mental leader since it was founded in 1998 as a salvage dismantler and recycler of passenger vehicles. Today, it is the largest vehicle recycler, with its North American operations recycling more than 90% of the materials from the vehicles it procures that would otherwise go to landfills. At the beginning of April, LKQ Corporation announced its inaugural [Sustainability Report](#) outlining the Company’s ongoing focus on responsible environmental, social, and governance (“ESG”) practices, including documentation of how the Company is promoting diversity, employee training, and safety.

LKQ Europe has implemented a state-of-the-art logistics network aimed at delivering products and minimising emis-



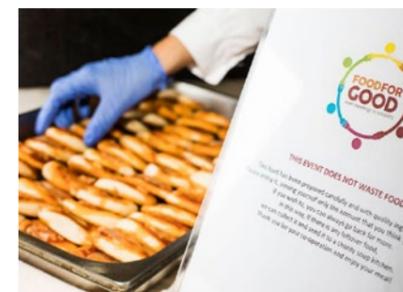
sions efficiently. The Company is working on an emissions sustainability roadmap with an annual reduction of CO₂ emissions in its fleet of up to 30% within the next ten years. The route towards zero emissions will be a combination of awareness and behavior that will be achieved, for example, through driver training, lower emission vehicles, alternative fuels, and ultimately alternative vehicles with adequate range and by also planning pilot projects in different countries all over Europe. In the UK and Republic of Ireland, LKQ just launched an electric delivery vehicle trial on the Isle of Wight. It will run for six months and consider charging point infrastructure to identify branches with vans whose typical mileage is suited to the range and capability of an electrical vehicle. LKQ is also considering pilot projects with fuel cell powered heavy trucks once vehicles and filling stations become available.

“We monitor the CO₂ emissions of all our operations including distribution centres, buildings, branches, products, and the more than 6,000 vehicles in our fleet,” stated Arnd Franz. “We will also encourage our suppliers to identify the carbon footprint of the products supplied to and distributed by us to ensure we make continuous progress towards becoming a CO₂-neutral Company.”

LKQ Europe has undertaken a number of initiatives at its facilities to reduce its energy use and related carbon emissions. And is exploring more opportunities to add solar panels to its facilities and purchases of renewable energy sources for its facilities over Europe.

As part of LKQ’s sustainability agenda, the roof of its new Central Distribution Center in the Netherlands will be fully equipped with photovoltaic panels, making the building completely energy self-sufficient. Partly because of this, the distribution centre has received the BREEAM Excellent certification. The large number of windows in the building provide plenty of daylight, creating a pleasant working environment. Additionally, the building is entirely gas-free and provides a sufficient charging infrastructure for electric vehicles.

In Germany, the Company has significantly reduced its carbon footprint in recent years by replacing 98% of all lights in more than 100 branches and its head office with energy-saving LEDs. STAHLGRUBER has been completely supplied with CO₂-



neutral electricity and gas for years.

In the Nordic countries, LKQ Europe is a leader in environmentally-friendly car dismantling, recycling, and remanufacturing of OEM automotive parts. The business consists of recycling and sales of used car parts as well as materials such as metal, rubber, glass, and many more. A reused car part consumes 100% less raw materials and natural resources than a new one. The Company’s passion for the environment drives it on a daily basis, and as the largest car dismantling chain in the Nordics, its work plays a major role in the industry’s recycling machinery. Working with insurance companies, it helps car owners, repair shops and dismantlers to repair cars more easily and cost-effectively – and to recycle to protect the environment.

LKQ’s people are its most valuable asset. It is committed to providing all of its employees with a safe and secure work environment, and it is investing in the future of its team through providing individual development and by offering interesting

career opportunities. In 2020, LKQ Europe also started to monitor and measure data relating to health and safety, diversity and equality, employee engagement and talent management in European entities and regions.

LKQ Europe is engaging in CSR activities in all its regions and countries in Europe to make an important contribution as an employer to the social and economic development of its local communities and also by collaborating with and investing in these communities. In the Netherlands, it aims to encourage employees to help others by raising money for a good cause and supporting various initiatives. The vision is to create a world where being sick, having (financial) problems, or loneliness no longer exists. In Italy, it is with several CSR initiatives, such as Food for Good, supporting charitable organizations with a free supply of food left over from meetings and events, and “Un cuore e un sorriso” donating spare parts for their vehicles used for their missions in Italy and Eastern Europe.

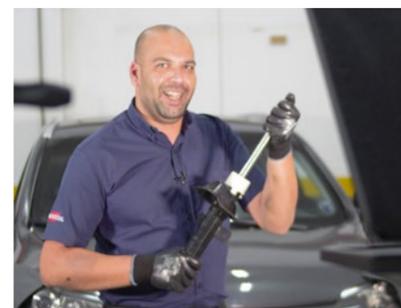
Maxxi Training:

A collaborative and transformative training platform for the sector

DPaschoal Group's initiative aimed at education in the automotive sector celebrates 10 years and, with the use of new technologies, it will continue to impact the value chain in the coming months.



Leandro Vanni – Head of Training



Leonardo José Tobias – Technical Instructor

Education is fundamental in any situation, be it for a country, an industry, or a company. It is essential for the growth and development of people and society. For this reason, since its foundation, the DPaschoal Group has had, as part of its DNA, a focus on professional qualification. Thus, 10 years ago, an innovative initiative was born – the Maxxi Training. Having as a mission preparing people to work in the provision of services and marketing of products, delivering excellent content that contributes to professional development or business management in the automotive sector.

The proposal was presented to the main industries in the sector which, over time, understood how the education and improvement of professionals could bring positive results to all those involved, strengthening brands, reducing guarantees by incorrect application, ensuring customer satisfaction, and, most importantly, professionalising and democratising knowledge in its segment.

According to Marcia Bonfim, Human Capital Director at the DPaschoal Group, "The proposal was unique in the sector, because bringing professionals together at knowledge fairs to learn new concepts and share experiences was, for many, something impossible or unlikely." During this period, the viability of events and the participation of professionals has grown significantly. About 650 knowledge fairs were held, with more than 100,000 certified professionals, 8,000 courses, and more than 100 industries and partner institutions involved.

KEY FACTS

Maxxi Training provides industry professionals with applicable training opportunities that is conducive to those with busy schedules.

The need to take knowledge to even more distant regions of Brazil and the growth of digitalisation have led the company to pilot online events in 2019, and with the pandemic outbreak, it was understood that it was time to expand the offer of remote training. According to Leandro Vanni, Head of Training at the Company, "Social distancing made us accelerate the process of training and qualifying professionals in online events. Today, we have the same number of par-



Training session about commercial diesel

ticipants in a single lecture as in a knowledge fair." Leandro reinforces that the new format enabled the participation of new students, and, in 2021, the rate of new participants exceeded 24%, including the participation of professionals

from other countries in Latin America and Brazilians who work abroad.

Understanding that the digitalisation of education is a trend that is here to stay, the Group hired a platform aligned with the most modern techniques in andragogy – adult-oriented education – in addition to aligning the Maxxi Training structure to the internal training areas, known as DPaschoal University, and the Technical

Training Centre, previously focused only on training employees. The new platform presents innovative features such as specific interactions with students throughout a video, a possibility for students to choose their own learning paths, as well as a continuous and open interaction between students and teachers. All resources are aligned with the Group's vision for the formation of the sector.

The Group believes in collaborative formation through useful concepts that have practical applications in

the daily routines of professionals. Another aspect highlighted by Marcia Bonfim is that the union of external and internal training operations brings even more content to the sector, making it easier for know-how transfer.

Along with the new platform, the Maxxi Training should expand its contribution to the sector, implementing a programme for new professionals. According to Vanni, the Group understands that it can provide an even greater positive social impact, training young people in small jobs, directly or indirectly related to the segment, through quick courses as a specialist at oil changing or even tyre balancing.

Finally, with its partners, DPaschoal Group is expanding the structure, bringing quality and accessible knowledge to the entire chain, 24 hours a day through increasingly comprehensive training programmes.



Login screen of new Maxxi Training platform

Start screen of the Maxxi Training platform

Example of training on Maxxi Training platform

Clarios sets standards for greater sustainability



Clarios, the world's leading battery manufacturer, is promoting sustainable initiatives.

KEY FACTS

Sustainability efforts are a primary focus for Clarios, the world's leading battery manufacturer.

Our commitment to the environment is an important part of our corporate responsibility," states Clarios Vice President, Christian Rosenkranz. "We constantly aim to minimise the environmental impacts of our products and processes. Sustainability is one of the key principles of our company:

our technologies and processes set standards in the industry for health, safety, and environmental protection in both production and recycling." All Clarios environmental and energy management systems are certified to the relevant ISO standards. "This is the cornerstone on which we are building our enhanced sustainability concept," emphasises Rosenkranz.

anti-corruption measures. "We take our duty of care very seriously and even go above and beyond this," adds Rosenkranz. "We are fully committed to compliance with all international standards for a sustainable supply chain. Because of this, we also require that our suppliers also meet our industry-leading sustainability standards."

The Clarios Foundation takes the initiative

The Clarios Foundation plays a special role by focusing on children's health. Together with UNICEF and the US non-profit organisation Pure Earth, the Clarios Foundation has launched the Protecting Every Child's Potential (PECP) initiative to prevent children from being exposed to lead. "This has brought us another step closer to our goal of making the world a little better," summarizes Rosenkranz.

Learn more about the Clarios recycling system and battery technologies [here](#).

Furthermore, Clarios' developments help consumers to save energy, protect the environment and reduce fuel consumption. For example, 7 out of 10 new vehicles with fuel-saving start-stop technology are equipped with an AGM or EFB battery from Clarios.

Responsible cooperation

Clarios is a signatory to the Global Compact of the United Nations. The company has committed to 10 universal sustainability principles and takes responsibility for human rights, labour and environmental protection, as well as

Closed loop

Working in conjunction with customers and partners, Clarios has developed a reliable and established closed-loop recycling system. Within Europe, this enables more than 98% of lead batteries from vehicles to be recovered and a large proportion of the materials contained to be reused. As a result, 90% of the materials in lead-acid batteries can be recovered and recycled. 75% of the lead in European lead-acid batteries is now obtained from recycled sources. Clarios' global recycling network means that automotive batteries are the most recycled consumer product in the



Continental: getting there first

New timing belts for young VW Golfs.

VW Golfs built from 2018 have only been on the road for two or three years, but many will already have clocked up well over 100,000 kilometers. Fact is that these models with the robust 2.0l TDI engine are favourites for the long daily commute. Which means that despite being relatively young, they're already up for a timing belt change.

We are the first supplier on the market to offer an aftermarket solution here in the shape of the CT1229 timing belt. The belt has a temperature-resistant polyamide fabric backing and a body made from fiber-reinforced elastomer with embedded tension members that offer excellent longitudinal stability. The next umpteen million flexing cycles are in good hands!

"We've been quick to transfer our OE expertise to the aftermarket here – and workshops are now enjoying the benefits,"

says Robert Franz, product manager EMEA.

3D exhibition stand offers workshops virtual trade fair experience

As the COVID-19 pandemic is, again, causing numerous restrictions on trade fair operations in 2021, Continental is presenting its new aftermarket products, trends, and technologies at an innovative online 3D exhibition stand. The virtual booth includes everything from air

springs to brake calipers and new tyre models, and can be visited conveniently at any time. Anyone who wants to

learn more about a particular product or service can find additional information by simply clicking on the exhibit. Workshops can start their online tour through Continental's comprehensive portfolio [here](#).

For anyone interested in an expert's opinion on the exhibits, there is also a [trade fair report](#) with tuning star Sidney Hoffmann.



KEY FACTS

Continental is the first aftermarket supplier to offer the CT1229 timing belt.



Delphi Technologies

by **BorgWarner**

Six seconds ... now that's fast

Delphi Technologies' full-service O₂ sensor solution brings OE design and engineering expertise to the aftermarket.

Delphi Technologies, a brand of BorgWarner Inc., knows that engine running errors can be challenging for the workshop to diagnose, especially if they hinge on replicating the fault in specific conditions like a cold start. This is why technicians need to equip themselves with the latest technology and know-how for the highest success rate, and where Delphi Technologies' OE expertise and full-service solution for exhaust sensors leads the way.

Delphi Technologies' O₂ sensors help workshops diagnose faults quicker

Take oxygen sensors as an example. The sensor, otherwise known as the O₂ sensor, does what its name suggests – it measures the amount of oxygen in the exhaust. Whilst this may sound like a fairly modest task, the O₂ sensor is actually one of the most important sensors on any vehicle, responsible for keeping the right balance between air and fuel for optimal emissions.

Delphi Technologies' O₂ sensors feature the industry's fastest particulate reaction time at just six seconds (faster than the current 100 metre world record!), which is paramount when the critical fault may be detectable in the first 30 seconds of start-up only.

Delphi Technologies' compact and powerful sensor will also help protect from future faults. This hard-working sensor is subject to a harsh environment including high temperatures and contaminants; Delphi Technologies' sensors boast an exclusive, poison-protection coating to reduce the risk of early failure from contamination.

Delphi Technologies brings this same OE design and engineering expertise to the aftermarket, providing a product solution that the workshop can fit with ease and confidence.

Application coverage

But it's not only about the exceptional O₂ sensor quality, the coverage is exceptional, too. Delphi Technologies aftermarket has a portfolio boasting coverage of the world's most popular vehicles, including the Volkswagen Golf, Renault Captur, Cadillac Escalade, and Ford Fiesta.

It doesn't stop there, Delphi Technologies will shortly be bringing O₂ sensors to market for the Volkswagen Arteon, Fiat 500, and Renault Kangoo.

Full-service solution

Diagnostics and training complete this O₂ sensor package.

The Delphi Technologies DS diagnostic

Delphi Technologies' O₂ sensors feature the **industry's fastest particulate reaction time** at just **6 seconds** which is faster than the current 100 metre world record!

tool supports the workshop with fault code identification, sensor activation, and adjustments for 48 vehicle brands and over 1,400 models, putting a well-rounded toolkit in the technician's hands. With training options available at sites around the world, together with Delphi Technologies' highly anticipated eLearning solutions, the workshop can ensure they are equipped with the latest knowledge to support their O₂ sensor servicing needs.

As a full-service provider, Delphi Technologies aftermarket brings together all the components of a successful workshop solution, ensuring vehicles drive cleaner, better, and further right through their life.

KEY FACTS

Delphi Technologies' sensors boast an exclusive, poison-protection coating to reduce the risk of early failure from contamination.



Learn more about Delphi Technologies aftermarket solution:
<https://www.delphiautoparts.com/gbr/en/category/engine-management>



KEY FACTS

DENSO's 'League of True Mechanics' e-learning competition provides participants with an opportunity to further their automotive industry knowledge.

Previous winners reveal why you should enter the 2021 'League of True Mechanics'

DENSO's 'League of True Mechanics' e-learning competition is back for 2021. Both mechanics and distributors across a range of European countries can now take part for free. Denso asked winners from the first season of the 'League of True Mechanics' to share their experiences.

DENSO has digitalised its online training courses to improve and test the knowledge of participants and award certificates and prizes to those with the top 10 highest scores. Available in more than 10 languages, new entrants can enjoy new courses, certificates, and prizes, further raising the possibilities for career progression. In the UK, the training programme is accredited by the Institute of the Motor Industry for all 2020 modules. New courses and modules are constantly being added in new languages; some with interactive content, to keep participants up-to-date on the latest trends.

Four previous winners with the top 10 highest scores agreed to share their feedback with 2021 entrants. They included: Sylwester Sidor, Karol Niedbalski, and Maciej Kuleta, all from Poland, along with Mário Eliaš from Slovakia.

How did you rate the difficulty of the courses?

All four winners said the courses tested their knowledge, one commented: "Some questions were clearly trying to trick me, but that motivated me to succeed."

How satisfied were you with the choice of DENSO product courses?

All four winners gave favourable reviews. One winner commented, "DENSO have a very good selection of product courses," and Mr Niedbalski said, "all the courses were immensely useful for deepening my knowledge."

Which topic are you most interested in from the point of view of DENSO products? What course would you like to add to e-learning for 2021?

These two questions gave DENSO insights into what makes technicians tick. It also shows the variety of interest when it comes to working on cars. Each technician had a different DENSO topic of interest.

These ranged from participants preferring to learn about:

- electronics, sensors, and common rail diesel systems; or
- air conditioning systems; or
- engine management systems and different elements of ignition systems; or

- everything to do with electricity, alternators, starters, control computers, sensors, and more.

When asked if there were any courses he would like to see in the future, Mr Eliaš said, "I would like to see courses on Electronic Control Units (ECU) and Exhaust Gas Recirculation valves (EGR)."

Would you recommend other mechanics to register for e-learning and test their knowledge? Any other comments?

All participants agreed that future applicants should register to take part in e-learning and to test their knowledge. One winner said, "I strongly encourage you to register and take part in training and tests. Thanks to DENSO, everyone can expand their knowledge and further their careers."

Have you got what it takes? Sign up for DENSO's e-learning now and you could be a winner of the 2021 League of True Mechanics contest!

Register today at:
<https://www.denso-am.co.uk/training/>

Exide workshop app: Test and sell batteries in 5 minutes

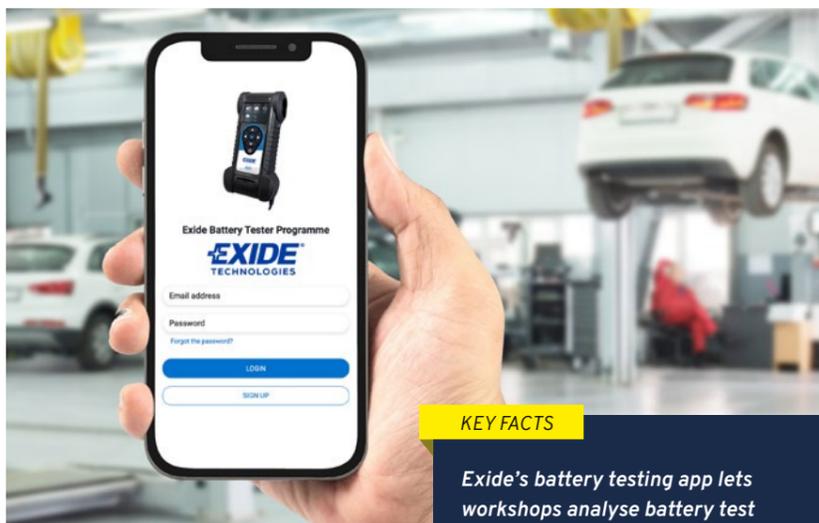


Exide Technologies, a leading provider of stored electrical energy solutions, has launched a unique battery testing app to make it easier for workshops to test and replace batteries. It lets workshops analyse battery test results and give customers replacement options – all within five minutes. 23% of tested batteries can be subject to replacement recommendation when tested with EBT965P, compared to 16% with other testing devices*, opening up a valuable new revenue stream for workshops and helping motorists avoid unexpected failures. Exide's solution is the first of its kind on the market.

Available for free to workshops

The app is designed for smart phones, but it works on any device with a web browser. Workshops can register for free at ebtp.exidegroup.com, where they will be guided through the simple and intuitive process. The app works in most European countries, is available in 13 languages and supports multiple currencies.

The app is designed to work with the Exide EBT965P battery tester. This next-generation device performs advanced analysis on the battery, offering exceptional accuracy through Conductance Profiling™ technology. Each test produces a QR code, which the web app can scan to import the test results. This covers cranking health, voltage, temperature, reserve health capacity and recommendations for



Exide launches the first ever battery testing app to simplify battery testing and replacement

KEY FACTS

Exide's battery testing app lets workshops analyse battery test results in order to give customers replacement options.

further battery treatment such as recharge. Test results can also be entered manually.

The app has license plate scan functionality, providing a quick and error-free way of ensuring the correct replacement battery is selected. Driving profile analysis is also available. This allows the garage to recommend a battery retested schedule,



increasing the chance of securing a sale at a later date.

Putting workshops in control

The app can send the motorists a SMS or an email inviting them to authorise the battery replacement when needed – saving workshops the time and effort of trying to reach them by phone. Workshops can present multiple battery options based on the fitment list coming from Exide and have full control over the price of the part and installation. Workshops are alerted as soon as a customer authorises the replacement.

*Source: Midtronics



GKN ballspline sideshaft with axial ball bearing

Put your trust in the original

Only spare parts from series suppliers guarantee unchanged handling.

KEY FACTS

GKN Automotive emphasises the importance in using premium spare parts to ensure continued reliability.

The drive specialists GKN Automotive are the undisputed number one in the field of sideshafts, propshafts, and constant velocity joints. It is crucially important to use premium parts from series suppliers, even in the automotive spare parts market, a fact that many only realise once it is too late. The quality of spare parts is usually assessed with durability in mind, but few people consider that they also influence driving behaviour and safety.

Drive and chassis technology has improved markedly over the last few years and is particularly sensitive to repairs and replacement of parts. This is an important issue for workshops because the market share of vehicles with complex four-wheel drives, multilink axles, and high-torque engines is constantly rising, not least due to the boom in SUV popularity. "Many of our developments have been instrumental in enabling the currently accepted active and passive safety standards to be fulfilled," says Frank Hürter, Commercial Director, GKN Automotive Aftermarket. "If a repair is necessary, it is vital to use components that comply with OE requirements in order to preserve the vehicle's performance." The following examples from GKN Automotive illustrate the high performance of drive technologies that are used as standard today.

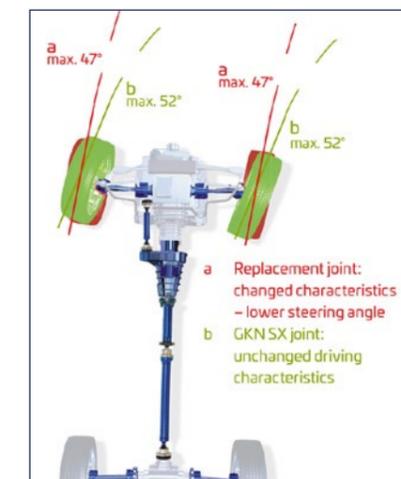
High steering angles

The front-axle driveshafts of four-wheel-drive or front-wheel-drive vehicles restrict their manoeuvrability, as their joints limit the potentially possible steering angle. GKN Automotive's SX joints increase the steering angle by up to 10% (see figure below) and can even transmit more torque at the same time. The required technology is complex (counter-running ball tracks with an S-shaped track profile) and protected by patents. If these are replaced by components made by other suppliers that do not have the same features, it will no longer be possible for the vehicle to drive in tight curves. The drivers will have to re-familiarise themselves with their vehicle, which will be less manageable in urban traffic and exhibit noticeably poorer handling on country roads.

Long spring travel equals safe and comfortable driving

Modern SUVs are not far behind classic saloons in terms of road holding and driving comfort. This is facilitated by complex axles that allow for long spring travel and that guide the wheels with consistent toe and camber alignment. The driveshaft must support length compensation to allow the wheel movements to be followed. GKN Automotive has developed an unusu-

al as well as highly innovative solution to this problem: an axial ball bearing that achieves longitudinal shaft displacements of over 70 mm (see figure above). This progressive design requires high-precision manufacturing technology and has given the GKN shaft its name: ballspline. The unprecedented longitudinal displacement values and the precise, lossless and smooth response result in comfortable and safe road performance. This has impressed numerous vehicle manufacturers so much that they employ our ballspline technology in a wide range of high-power, four-wheel-drive vehicles.





HELLA brings latest 77GHz radar technology for passenger cars into series production

Innovative 77GHz radar sensors from HELLA are core components for automated driving.

KEY FACTS

Automotive supplier further expands position in radar sensor technology with numerous major orders.

With over 90 million 24GHz sensors, HELLA, the internationally positioned automotive supplier, is one of the world's largest suppliers of radar sensors. With the introduction of the 77GHz radar sensors, the company is now further expanding its leading position in the field of radar technology. For example, series production of the latest 77GHz radar technology for an international automobile manufacturer has now started at the HELLA electronics plant in Hamm, Germany. The technology was first brought into series production in the truck sector last spring. On the basis of numerous major orders acquired for both passenger cars, including one from a German premium manufacturer, and for trucks, further production will follow in the near future. HELLA is also already developing the second 77GHz radar generation, which will go into series production for another German premium manufacturer in 2024.

"With our innovative 77GHz radar sensors, we are continuing to drive the trend towards automated driving," says Björn Twiehaus, who, as a member of the HELLA Management Board, is jointly responsible for the Electronics division. "By using

highly efficient hardware and smart software, we are taking radar-based, 360-degree environment perception to the next level and are, thus, driving safe mobility."

From assisted to autonomous driving, radar sensors have established themselves as one of the core technologies for seamless environment perception. They continuously record the environment, recognise pedestrians and other traffic participants, and objects around the vehicle, delivering reliable results regardless of weather and lighting conditions. Especially with respect to functions such as autonomous parking or automated lane changes, 77GHz technology is becoming increasingly important, as it offers a significantly larger signal bandwidth and, thus, improved environmental resolution compared to 24GHz. This makes it easier to detect and classify objects on the road.

The centerpiece of the 77GHz radar sensors from HELLA is the radar system chip, which is based on RF-CMOS technology. Thanks to the special architecture, digital components as well as systems for self-diagnosis can be integrated on the chip in addition to the components for transmitting and receiving. HELLA radar

sensors are also based on a modular, scalable platform concept. They, thus, support different vehicle architectures and interfaces such as Ethernet. Customer-specific requirements as well as current and future NCAP requirements can, thus, be implemented flexibly and efficiently.

HELLA is continuously working on further increasing the performance of the 77GHz radar sensors. The second generation 77GHz is characterised in particular by the latest antenna and chip technologies. This increases the range, extends the field of view, and further improves the measuring capability at close range. Objects such as trucks, cars, bicycles, and pedestrians can be detected and tracked even more precisely in this way, which ultimately leads to more informed decision-making rules, when initiating a lane change or parking, for example. With this, the position and height of even small objects such as kerbs and roadside posts can also be determined more accurately.

In conversation with Swedish Rallycross driver, Mats Öhman



KYB sat down with Mats after his 2020 season.



impact very well because I do not have the ability to resist, so with these I do not land as badly. It was a very good update.

KYB: Give us some insight into the importance of getting the dampers right, to have a successful rallycross season.

Mats: Wow – dampers are incredibly important! Without them, it doesn't matter what kind of engine you have in the car. Dampers are a whole science. Knowing how to adjust according to the surface and weather is both fascinating and incredibly important. I have a very good feeling with these dampers and think they help me get the car to where I want.

KYB: What advice would you give to other people who have suffered life-altering injuries?

Mats: I saw two choices: either give up or do what I can with life as it looks now. I chose the latter. Of course, it's not easy when you are newly injured. I was really physically challenged and in the beginning I saw myself lying there with long-term care. I could not even touch my nose, couldn't dress myself – what could I do in life? But it is important not to give up. Tomorrow comes, no matter how injured you are and how dark it feels, there is always tomorrow. There is nothing that goes as fast as snapping your fingers, but it becomes a whole new life and it takes time to adapt to it. But it is possible to live with a disability.

Mats Öhman is a Swedish rallycross driver who suffered a spinal cord injury leaving him paralysed from the waist down after a snowmobile accident in 1998. He was an accomplished Snowcross competitor – a 7-time Swedish champion and a European champion with 2 Nordic championships under his belt.

Despite his injury, three years after his accident he started racing cars and has since competed in the World Rallycross and European Rallycross championships, using a vehicle adapted with hand and arm controls.

KYB was privileged to interview Mats after the 2020 season, where the car he drove was using KYB electronic power steering and KYB shock absorbers.

KYB: Describe the inside of the car, how does everything work?

Mats: My mobility continues to get worse, I currently have about 10% mobility. I am

completely paralysed from my armpit down, in my arms I have a little feeling and mobility left but nothing in my fingers. So, everything is controlled with my upper body and I have no pedals. I start with a button in my mouth. Instead of a steering wheel, I have a knob on a lever that I control with my left arm. I control the rest with my right arm. The throttle is backward and the brake is forward. I shift the gears with my elbow, upwards shifts up and downwards shifts down. By rocking sideways, the clutch sits in one direction and the parking brake in the other.

KYB: How are the new KYB dampers on the Audi S1?

Mats: It was a completely different world when I tested KYB's dampers for the first time. A completely different feeling to land, after the jump I even thought: "have I really landed?". Absolutely incredible compared to before. My body can't handle

KEY FACTS

Mats Öhman drove the Audi S1 in his 2020 season which featured KYB electronic power steering and KYB shock absorbers.

Your best choice

MAHLE is your expert partner for everything related to air conditioning and cooling.

MAHLE's comprehensive original equipment expertise allows them to deliver not only all BEHR thermal management spare parts under the MAHLE umbrella brand, but also workshop equipment and diagnostics and a wide range of additional services to put you in control of your day-to-day workplace operations. Use the new MAHLE TechTool, the digital version of their refrigerant filling quantities manual, the new technical brochures, and their PREMIUM LINE product flyer to set yourself up optimally for you and your customers!



TechTool

- Combined expertise and photo-realistic representation.
- Explanation of how air conditioning and cooling circuits work, including all relevant components.
- Active support during troubleshooting.

- Repairs supported by technical background knowledge.
- Optimised for all devices.

Technical brochures on air conditioning and cooling

- Over 75 pages each of comprehensive air conditioning and cooling know-how for education, training, and workshop support.

Online filling quantities tool

- Filling quantities information for refrigerants and air conditioning compressor oils provides invaluable technical support in your everyday work.

SIMPLE FIT

Making fitting simple!

- Installation accessories, such as O-rings and seals, are already included with products bearing the special SIMPLE FIT label, saving you time and money when ordering parts.
- With some 1,850 products, there's always a good solution.
- The accessories supplied don't need to be purchased separately, and you can start the installation straight away.
- Moreover, the installation accessories suitable for and supplied with the particular thermal management product ensure assembly can be carried out easily, quickly, and correctly.

MAHLE

KEY FACTS

MAHLE's new TechTool features manuals, brochures, and product flyers set up digitally to meet your needs.

- In TecDoc and other electronic catalogues, products bearing the special SIMPLE FIT label display a separate list of the accessories included. These are also summarised in the blue bar above the product image.

PREMIUM LINE

Spare parts in OE quality!

- The around 4,700 PREMIUM LINE products in OE quality are particularly durable. Thanks to their higher capacity reserves, they deliver peak performance even under extreme conditions, making them the ideal solution for customers who expect the best.
- However, the approximately 3,500 products in OE-matching quality without the PREMIUM LINE prefix also offer good performance at an attractive price. Under normal conditions, there's no difference in performance compared with the PREMIUM LINE.
- In roughly 1,200 applications, the customer can choose between OE and OE-matching quality—the right product for every customer.

Visit mahle-aftermarket.com for more information.

MANN FILTER

Scoring a technical knockout

MANN-FILTER: The difference is in the details!

On the surface, filters often look very similar. On taking a closer look, however, you can see striking differences in quality. MANN+HUMMEL explains exactly where the differences are found and why it is so important to rely on products from MANN-FILTER. They will show you why some filters fail early on and can't deliver what they promise – and why MANN-FILTER should be your first choice.

Only close scrutiny will reveal more about the design, materials, and features of these quality filters. MANN-FILTER has, therefore, prepared a four-part series that takes a closer look at the most important details. In this part, they focus their attention on the MANN-FILTER OE-quality air filter.

Filter medium

- Application-specific filter medium according to OE requirements.
- Full filtration capacity within the entire maintenance interval plus reserve capacity.
- Consistent high engine performance.
- Top protection for engine, airflow sensor, and other sensitive components.

Seal

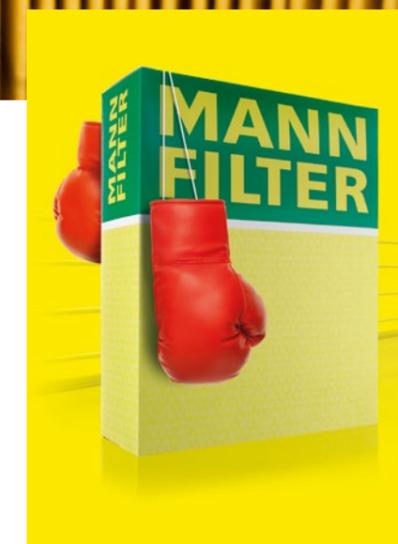
- Tight-fitting MANN-FILTER PUR foam seal.
- Perfect fit in the filter housing.
- Sealing contour adapted to the housing.
- Durable in all common temperature ranges.
- Maintains the required elasticity over the entire maintenance interval.

Stabilisation

- Optimum pleat geometry and stability even under intense loads.
- Special embossing process of the filter medium.
- High-quality impregnation with high chemical resistance and mechanical stability.
- Provides the best conditions for a properly working airflow sensor.
- Consistently high filtration performance, even under damp and wet conditions.
- Stabilisation.

Safety

- Protective fleece medium on the air filter (pre-filtration in dusty environments plus water and snow separation).
- Improved protection against vehicle



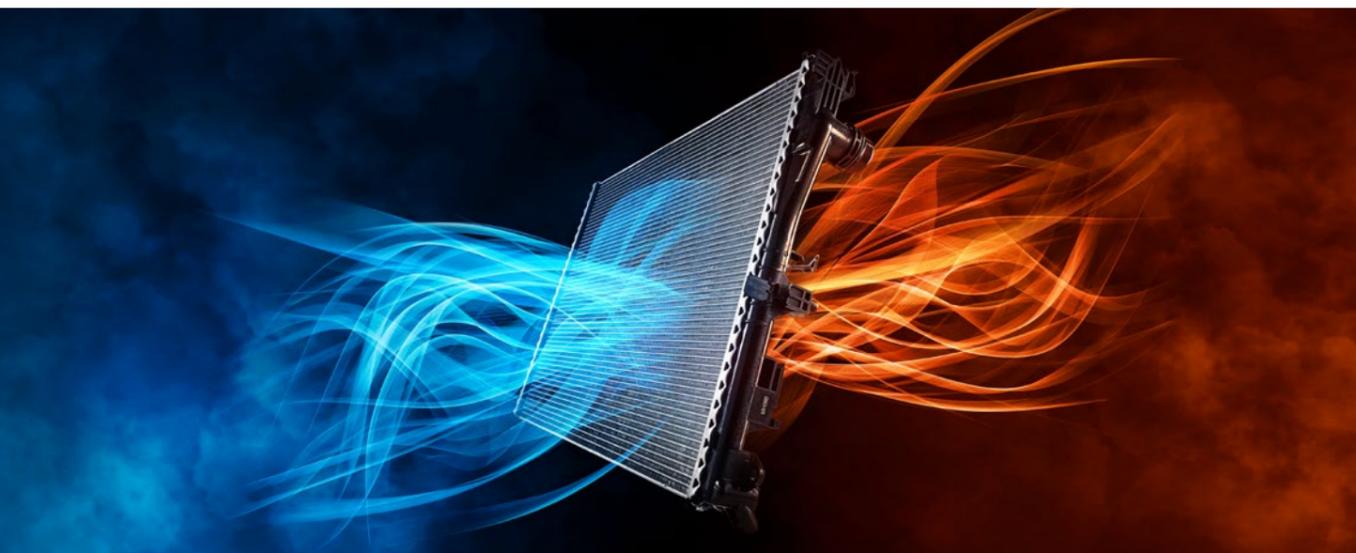
fires thanks to flame-retardant impregnation of the filter: The risk of fire after contact if a smoldering cigarette is sucked in is reduced significantly.

MANN-FILTER air filters reliably protect the engine from wear, thereby preventing unwanted and often expensive repairs. They are, therefore, an investment in long-term customer satisfaction and trust.

With over 1,670 different types of air filters in original equipment quality, MANN-FILTER covers nearly 97% of the European passenger car and transporter fleets.

KEY FACTS

100% OE quality, design, materials and features speak for quality MANN-FILTER filters.





Oiltek motor oil

The new and complete range of engine lubricants from Magneti Marelli Parts & Services.

Magneti Marelli Parts & Services has announced the launch of Oiltek, a new and completely premium range of engine lubricants developed with a strong partner. Shell has been chosen due to its industrial capacity and longstanding experience within the lubricants market. The range is available throughout Europe starting in May in Italy, Spain, Portugal, Poland, and Eastern Europe.

KEY FACTS

Oiltek engine lubricants have been developed with Shell for enhanced performance. The Lubefinder online tool helps you identify the right engine lubricant in minutes.

The Oiltek range is formulated with synthetic base oils and premium additive packages and has been designed to meet the specifications set by vehicle manufacturers and for compatibility with recent technology for engines and for the abatement of emissions such as particle filters and selective catalytic reduction. Their formulation based on synthetic base oils and premium additive packages provide increased resistance over time and at extreme temperatures, reduced friction, and guaranteed cleanliness of the engine and emissions systems.

The Oiltek range of engine lubricants now includes 10 different formulas – 9 synthetic oils and 1 semi-synthetic oil, available in 1L, 4L, 5L containers as well as in drums – that meet the main demands of car mechanics, allowing them to service a wide range of cars from older vehicles to modern engines.

To provide support for dealers and car



mechanics in selecting the right lubricant, Magneti Marelli Parts & Services has set up a practical online tool, the Lubefinder (currently available in Italy, Spain, and Poland), which allows the correct engine lubricant to be identified in just a few steps.

The launch of the Oiltek engine lubricant range is accompanied by a series of marketing tools developed by Magneti Marelli Parts & Services to promote brand knowledge in the aftermarket sector.

With the large-scale launch of Oiltek, Magneti Marelli Parts & Services completes its offer for the aftermarket sector, which stands out for its high-quality products, offering excellent performance and the ability to satisfy all servicing requirements for the most common cars in circulation in Europe.

Timing belt kit with water pump

metelligroup
AUTOMOTIVE PASSION



Metelli Group's expanded offer is a complete range and 100% tested.

Metelli Group's expanded offer of timing belt kits with water pump, increasingly demanded by the market, is getting wider with over 200 codes for about 7,200 different engines for 90% coverage (110 million vehicles) of the European car parc.

The kit contains all the components required for the complete repair (or replacement) of the engine timing and cooling system: belt tensioner, water pump and timing belt.

Metelli produces 2 of the 3 components – the tensioner and water pump – relying on premium manufacturers for the timing belts. Various car manufacturers have recognised Metelli's great expertise in water pumps, selecting it as OEM/OES.



As well as the water pump, Metelli Group has also developed considerable know-how with reference to automatic tensioners, with the aid of Group companies. The entire manufacturing process, from design to assembly and testing, is handled in-house.

10,000 hours' worth of tests a year allow Metelli to assess the performance and quality of products both in the phase when new applications are being studied and during the production phase itself.

To support the design process, bearing and automatic tensioner test benches make it possible to check their characteristics with a series of functional parameters – temperature, durability, and resistance to frequency stress – comparing



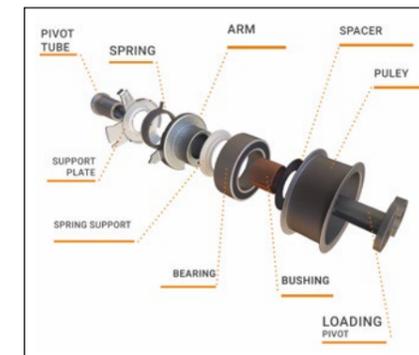
them with those of the original products and simulating their life cycle.

Type-approval is performed through 300 hours of continuous durability testing, simulating the bearing's life and performance, verifying its reliability in heavy-duty conditions in order to meet the criteria and corresponding standard requirements also used by OE manufacturers.

5-year guarantee

Metelli Group has decided to guarantee each component for a period of 5 years. This decision is based on the fact that having produced spare parts for over 50 years and proving its excellent quality and control system, the lifespan and reliability of these parts over time is fully guaranteed. Discover the service.

Choosing a timing belt kit with water pump means choosing superior quality guaranteed by Metelli Group. The kit re-



produces the standards that have characterised the Metelli philosophy from the beginning – quality and reliability.

KEY FACTS

Coming with a 5-year guarantee, Metelli Group's timing belt kit with water pump will meet the needs of the market.



The aftermarket is changing

High quality parts and innovative engineering – it's what NGK SPARK PLUG is known for.



NGK SPARK PLUG helps to ensure that modern internal combustion engines are powerful and clean. But tomorrow's aftermarket needs more, and the ignition and sensor specialist is ready for that – and more.

The automotive industry is in a period of rapid change: ecological and social pressures will continue to grow, and many large manufacturers have already announced plans to phase out their production of internal combustion engines (ICE). This does not mean that people are going to give up on mobility, but they are going to look for alternatives to the car they have today. NGK SPARK PLUG is a strong and dynamic company, well-equipped to withstand those challenges.

A new world of opportunities

On one hand, the automotive market is facing growing environmental pressures and regulations. And indeed, as a large multinational company, NGK SPARK

PLUG is very aware of its responsibilities. When it comes to environmental awareness, this shows itself in the exceptional quality of the company's engineering. The highly efficient ignition and vehicle electronics parts the company produces play an important role in reducing CO₂ emissions.

Tomorrow's mobility

Looking to tomorrow and beyond, the company has established a global innovation division to work on a broad range of projects that target future-oriented mobility and more. There is no doubt that the company will continue to play a major role in mobility. Indeed, it will build on its existing expertise and branch out into areas such as providing Mobility-as-a-Service (MaaS) as well as tailor-made maintenance services.

One of the really strong developments today is the increasing use of electrically powered vehicles. All indications are that

EVs will be exceptionally important for the mobility of tomorrow and NGK SPARK PLUG is also involved in a wide range of developments in the field of battery technology. Beyond that, it is also working on new products in ultrasound medicine and ceramics used for connectivity.

A global vision

The company's long-term management plan is creating four strong business pillars: 'Mobility', 'Environment & Energy', 'Medical', and 'Communication'. The plan also ensures the company will continue to take care of its social responsibilities by promoting diversity within the company and strengthening those aspects that empower employees to think outside the box and to take risks. Behind all this is an even bigger vision entitled 'Beyond ceramics, eXceeding imagination'.

**Beyond ceramics,
eXceeding imagination**

It is about the future of the company as a multifaceted organisation, working with passionate individuals to bring about a better society. NGK SPARK PLUG will be a company that transcends the imagination, with technology that transcends boundaries.



KEY FACTS

NGK SPARK PLUG's 'Beyond ceramics, eXceeding imagination' vision highlights the company's goals as an aftermarket leader.

Nissens
DELIVERING THE DIFFERENCE

KEY FACTS

Nissens Automotive's AC compressor and condenser offering caters to a large percentage of the European car parc.

Stay cool with Nissens in the busy AC season

At the season's peak, everyone's focus is to service their customers at the highest possible level. Learn how Nissens Automotive ensures their partners are ready for the busy climate season with a highly competitive offering of air-conditioning (AC) products.

The first critical parameter to address the AC market is the parts program. AC requires a wide range of parts, including the major system elements and the product novelties covering the newest and most popular vehicle models – each season, more than 200 new parts are required in the range. The Nissens AC programme covers all crucial system parts: AC compressors, condensers, interior blowers, evaporators, receiver-driers, fans, and most recently, thermal expansion valves (TXV). Also, more than 200 components in the range fit the most popular hybrid and electric vehicle applications.

Coverage of the car parc is another crucial dimension where Nissens comes with a notable distinction. The two most frequently replaced components during the season are excellent examples. More than 600 AC compressors and 1,200 condensers in Nissens' range cater to 79% and 94% of the European car parc. Thanks to the company's thorough supply-chain planning done way before summer, Nissens' stocks stay ready to serve the market during the hottest days, no matter whether it is a fast mover or an exotic

application part that must be shipped. Nissens' business concept includes active support to partners to prepare and optimise seasonal stocks to match the local market's product demand in the best possible way.

Finally, alongside the premium quality components and attractive range, Nissens also has a reputation for valuable technical support for the benefit of the aftermarket sector. The AC system technical knowledge is provided through various forms, from print to online, including technical training, self-learning modules, technical tips, and detailed installation & troubleshooting guides. The best practice sharing from Nissens also includes topics covering Hybrid and Electrical Vehicle HVAC systems based on heat pump solutions.

Nissens AC parts facts

- More than 3,000 parts, catering for more than 17,000 OE part numbers.
- The newly introduced range of 60+ Thermal Expansion Valves (TXV) covers more than 290 OE numbers for the most popular car, van, and truck applications. All equipped with O-rings and mounting bolts, whenever applicable by OE.

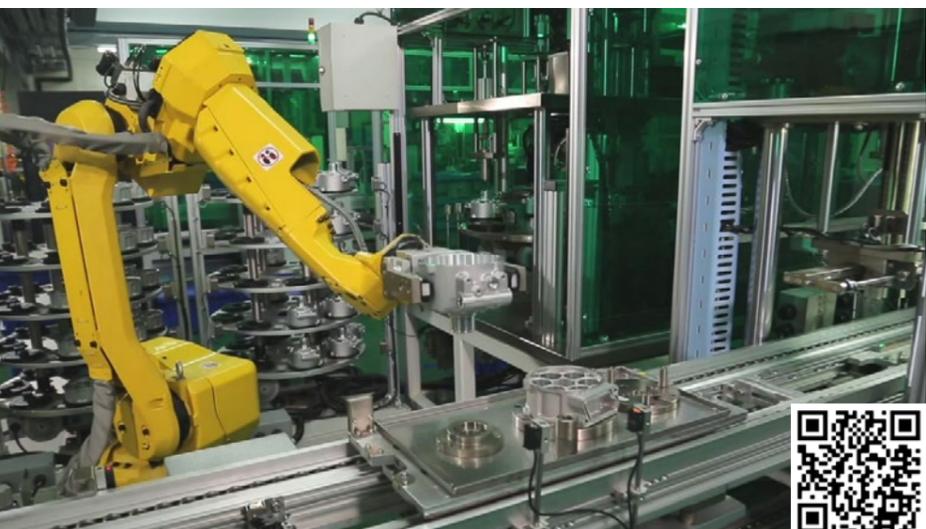


- All Nissens compressors are First Fit products - pre-filled with the right type of lubricant and include O-rings, as well as an electrical harness and connectors or a protective pre-filter, whenever needed.
- Nissens' condensers include O-rings and are protected from corrosion with a specially designed coating. In saltwater tests, condensers treated with this corrosion protection function up to eight times longer than non-protected condensers.

All in one place for maximum convenience

Whether on the distribution or installation side of the business, all the vital information related to the Nissens Climate System Parts programme can be found at www.nissens.com/climate, including product feature reviews and data, technical training offer, and professional AC system service-related technical material.

How it's made – NRF aftermarket compressors



Scan the QR-code to watch the video of the fully-automated production line.



The new factory is located close by their largest European distribution center in Gdansk, which will ensure strong logistical service. With the opening of this new factory in Poland, NRF closed part of their production in the Netherlands. At the new location, NRF has the opportunity to further improve their processes. Furthermore, NRF is able to improve and enlarge its product range.



“With opening this new factory, I am absolutely convinced that we can keep our leading position in the market and make it even better with new products and services,” said Timo Schlotzhauer, Director Industrial and Marine at NRF.

At this new factory, NRF will produce a large variety of custom-made oil, water, and air coolers for the automotive aftermarket, as well as for OE customers. NRF is specialised in making products for the railway industry, agricultural and off-highway machinery, and gensets.

KEY FACTS

NRF highlights its fully-automated compressor production process and opens a new factory in Poland.



Scan the QR-code to watch the video of the new factory.



NRF compressors are made on a fully-automated production line. Due to this production process, NRF set new standards on low warranty rates in the aftermarket.

Fully-automated production process

Even the smallest piece of dirt can have negative effects on the performance of a compressor. To achieve the highest quality, NRF compressors are made at a fully automated production line. The production takes place in a dust-free environment. Even the sorting and selection of specific parts is computer-controlled.

After production, every compressor is subjected to a number of strict inspections and quality and performance tests. Therefore, NRF guarantees a reliable and durable product. The total NRF compressor range consists of 1,022 references.

Benefits of the NRF compressor range:

- Largest aftermarket range.
- Meets or exceeds OE performance.
- 95% is Easy Fit (O-rings included).
- Prefilled with the correct OE-oil.

- An installation manual is supplied with each compressor.

NRF opens new European factory

With more than 90 years of experience, NRF is a leading manufacturer and supplier of cooling parts. NRF is constantly developing. And right now, NRF takes the next step to be ready for the future. NRF is very proud to announce the opening of its new aluminum factory in Gdansk, Poland.



NTN-SNR readies new generation wheel bearing with compact CV joint

With the unique requirements of electric vehicles in mind, world-leading automotive manufacturer NTN-SNR is currently working on the design of a new, more compact wheel bearing / CV joint assembly.

Understanding the technical challenges associated with the way the width of the bearing affects vehicle performance was a key element in the success of this project. A true technological breakthrough, this new wheel bearing design is also the result of close collaboration among various teams within the Group. This enabled the manufacturer to leverage the full competitive advantage of its in-house know-how to redefine the interface between the bearing and the usually inaccessible CV joint.

NTN-SNR is familiar with the issue of the axial space constraints imposed on the assembly between the wheel bearing and the CV joint. However, the length of the drive shafts – which is imposed by, among other things, the width of the powertrain – is also a determining factor that directly affects the steering angle. In view of the architectural evolution of vehicles, especially electric ones, the manufacturer established the ambitious goal of reducing the width of the wheel bearing by 40mm. By significantly reducing axial space requirements for a larger steering angle in these new vehicles, NTN-SNR will give its customers greater latitude in the design of automotive running gear while achieving a technological edge over its competitors.

That research gave rise to two new wheel bearing / CV joint architectures. The first architecture reduces the axial space requirement by 35mm, enabling up to 3° more steering angle. Completed at the end of 2020, the prototype has been under testing since January 2021. As for the presentation of this innovation to potential customers, that is scheduled to happen before summer 2021.

This new bearing is intended for electric vehicles with a dedicated platform. Electric vehicle models have an electric powertrain with which width severely restricts steering angle options. Its use on minicars, regardless of the type of drive system – internal combustion or electric motor – makes it possible to achieve an extremely small turning radius, which is clearly advantageous for maneuverability.

A radical departure from earlier designs, this new bearing resulted in the drafting and registration of patents concerning design and architecture rules as well as its sealing. Basically, the geometry of the new bearing design changes the position and diameter of the seal. Now enveloping the drive shaft, the latter is larger and provides more room to make it even larger, thereby offering extraordinary design options. To limit the risk of increasing the friction torque, new architectures have also been created.

For more than 100 years now, NTN-SNR has been proud to innovate and develop tomorrow's technologies. That's why it is open to sharing the licenses of this new bearing, as it did for the market launch of ASB, today's new standard for measuring wheel speed.

KEY FACTS

NTN-SNR's new wheel bearing with CV joint is a breakthrough and the Company is willing to share its licenses.

OSRAM: Your 1st choice in a changing automotive world

For over 110 years, OSRAM's industry-leading automotive lights have helped motorists navigate the unexpected. Now, OSRAM's automotive care & equipment portfolio will ensure that customers are fully prepared for every journey – from an advanced UV air purifier and dash cameras to tyre care, battery care, and more.

OSRAM now goes beyond light in the aftermarket

After the merger with Ring Automotive in 2019, OSRAM has strengthened its aftermarket business. The company was able to expand the retail market beyond its existing portfolio of automotive lighting to achieve further growth and offer new product opportunities including automotive electronics and accessories for end customers and workshops. Currently, they are launching dash cameras, air purifiers, and battery and tyre care products. Their inspection lights portfolio is also being optimised. And this is just the beginning – there is much more to expect in the future for OSRAM's customers.

Five new product categories to get customers road ready

Battery care

Whether caused by freezing temperatures, parking for extended periods or leaving the lights on, a dead battery always causes frustration. OSRAM's new range of premium-quality battery starters prevents you being caught off-guard and unprepared. Situations like these can already be avoid-

ed in advance by keeping the battery charged at optimum levels with OSRAM's range of premium-quality smart battery charging and maintenance devices.

Tyre care

In addition, too many motorists ignore the risks of driving with poorly inflated tyres. Proper tyre care can help keep them safer on the road. With premium quality tyre care products from OSRAM, drivers will get the optimum performance from their tyres, even in tough conditions.

Dash cams

Nobody can predict when road incidents and accidents might happen, but you can be ready if they do. Premium quality OSRAM dash cameras capture unexpected details in crystal clear vision. High-resolution and wide-angle lenses record activity outside the field of vision, allowing them to stay focused on the road ahead.

LED inspection lights

Changing a wheel, topping up oil and water or performing a routine inspection – with OSRAM LED inspection lights it's easy to get it sorted in the dark. High performance,

long-lasting LEDs produce up to 6,000K of powerful cool-white light, delivering intense brightness to the darkest corners.

Air purifier

Air quality may not be first thing that comes to mind when talking about road safety, but it is certainly worth considering. With the AirZing Mini air purifier you can protect yourself from unseen dangers. This powerful and stylish device eliminates 99.9% of viruses and bacteria in the air¹ whilst also removing allergens and pollutants.

All in all, OSRAM's entire aftermarket portfolio is closely aligned to the needs of its customers and provides them with the right product. Whether they want to maintain their vehicle with automotive accessories and electronics or want to upgrade their headlights with high-performance lamps – at OSRAM they will find what they need.

With the new automotive care and equipment products, OSRAM is expanding its automotive aftermarket portfolio.

KEY FACTS

OSRAM offers five new product categories, beyond lighting, to help ensure drivers are prepared for every journey.

¹ Verified by independent laboratory tests in accordance with GB/T 18801-2015



INDUSTRIE SALERI ITALO
Premium water pumps



Saleri sees global growth with production sites and OE supplies

Saleri, the IPAS in water pumps, is expanding its global presence by opening a new plant in Mexico and being recently nominated as OE supplier for various new engine platforms.

Last year was a significant year for Saleri's international expansion plans. In fact, it began with the opening of a subsidiary in Mexico to broaden its presence in the North American region.

Mexico has become a strategic footprint to serve the North American market. For some years, leading car makers have been intensifying their production activities and have been asking their strategic suppliers to follow them in order to optimise production processes. In fact, in 2019, Saleri received an official nomination by Volkswagen de México S.A. de C.V for series production of mechanical water pumps for EA888 engine platforms. On this specific platform, Saleri has become the number one supplier for Volkswagen Group worldwide.

Saleri Mexico S.A de C.V. is located in an industrial park near Monterrey Airport (OMA VYNMSA Aero Industrial Park). The site is situated 230 km from the US border. The production facility covers 3,000 sqm and could be extended by 2,000 sqm

in the future. Since the nomination, activities have included production tests in the first few months of 2020 while mass production officially started in January 2021. The Mexican subsidiary has ambitious plans that are in line with Saleri's global strategy of increasing the internationalisation of its brand and products. This will allow the company to expand its international presence, covering all of the key geographical areas for the automotive industry.

"The presence of a production plant in the Americas opens up the possibility towards a promising future," remarked Marco Pinnacoli, Saleri AM Global Sales Director. "In the long run, our Mexican and Northern American aftermarket customers will benefit from being closer to their needs."

Additionally, Saleri has extended its global footprint through new OE-nominations around the world. It has been awarded the EA211 engine from ŠKODA AUTO in India to supply its innovative cooling water regulator system.

In the European market, which is of major importance for the aftermarket, Saleri has confirmed its leading role as a strategic and technological partner with the nomination for the supply of the mechanical water pump for Lamborghini's LB74x V12 engine and the advanced electrical water pump for Audi's MLB53w and MLB58w EU7 engine.

More information about Saleri's aftermarket is available at www.aftermarket.saleri.com, where its extensive product catalogue, product datasheets, instructions, certifications, and training videos can be accessed.

KEY FACTS

Saleri opens subsidiary in Mexico, in line with its global strategy, and now covers all key geographic areas for the automotive industry.

Sustainability in the aftermarket

In conversation with Jens Schueler.



Jens Schueler,
President Automotive Aftermarket

With growing concerns about climate change and environmental degradation, sustainability has become a strategic priority for the automotive industry and the automotive aftermarket as well. How does Schaeffler Automotive Aftermarket contribute to it?

For suppliers, sustainability in the automotive aftermarket is currently being shaped by four important aspects: the production footprint of our systems, kits and components, the purpose of the product we sell, the logistics footprint and the contribution to reduce waste.

Our business model supports vehicles to be roadworthy and compliant to the latest environmental regulations throughout the entire lifecycle. Thanks to our global footprint and in close partnership with our customers, we are able to deliver state-of-the-art repair solutions as local as possible that support to extend the life cycle of the vehicles. This means that we concretely contribute to

the sustainability targets from both ends of the spectrum. For this reason, sustainability is a fundamental part of our strategy.

A clear focus on electromobility makes a key contribution to sustainability. In almost all European countries today, e-cars already have a clear climate advantage. In your opinion, which spare parts will be needed in future?

At Schaeffler, we think that high-quality repair solutions for hybrid vehicles are a key element of a holistic mobility shift. The technical challenges here are diverse and complex. For example, hybrid cars with P0 drive systems have an electric motor in the belt drive in addition to the classic combustion engine. The 48-volt mild hybrid technology plays a central role in transforming the FEAD system from a power consumer into a power

SCHAEFFLER

supplier. With the INA FEAD KIT, we are the first supplier in the aftermarket offering a repair solution for hybrid vehicles with 48 volts. We are very well equipped for the repair of current and future hybrid vehicle generations and are constantly expanding our portfolio. This also includes other hybrid variants such as full hybrids and plug-in hybrids.

Hybrid and electric vehicles naturally require different technical support. What will matter in the future?

The increasing technical complexity and connectivity of vehicles requires innovative repair solutions, the development of new business models, and supporting services. Our goal is to make

it easier to diagnose defects and support or simplify the repair process with data-based services. By adding data-based services and innovative plug & play repair

solutions to our portfolio, we are continuing our evolution from a component supplier to a provider of systems and integrated solutions.

Under the Schaeffler brand REXPART, we offer technical support for workshops as well as for the repair and maintenance of vehicles of all brands and segments. We are working consistently on digital solutions to make the diagnosis of defects easier and to support or simplify the repair process with data-based services. One of these is the REXPART app. Comprehensive product information, valuable tips such as tightening torques, working values, access to the TecDoc catalog or repair instructions are just some of the functions and contents of the new REXPART.

<https://aftermarket.schaeffler.com>

KEY FACTS

Evolving from a component supplier to a provider of systems and integrated solutions, Schaeffler's REXPART app offers technical support for workshops.



KEY FACTS

Valeo's iBSG 48V meets demands set by both the market and by environmental policies.

Valeo's innovative iBSG 48V solution to reduce CO₂ emissions is now available on the aftermarket

With its iBSG 48V (Integrated Belt Starter Generator), Valeo has successfully risen to the challenge of increasing the performance of vehicles driven by internal combustion engines, while also reducing their fuel consumption. A technology destined to become more widespread on the market in the years to come.

Driving the development of electric vehicles

With the regulations on CO₂ emissions and pollution becoming stricter in Europe and worldwide, and a growing number of consumers turning to more ecological offers, carmakers and equipment suppliers are faced with the need to develop more responsible products.

Stop-start technology, pioneered by Valeo with i-StARS in 2010, was an important step forward. Increasingly complex technological developments have been established since then in order to reduce CO₂ emissions, including the 48V technology, which will become indispensable in the years to come. Consequently, electric vehicles and the 48V technology will dominate the market by 2030.

An ultra-high-performance system

In 2017, Valeo started supplying iBSG 48V alternator systems with built-in electronics as original equipment. As well as oper-

ating as an alternator and starter motor, this system fulfills four additional functions that reduce fuel consumption and therefore CO₂ production by up to 6%*.

- It recharges the battery to assist the engine and to supply power to the vehicle's equipment.
- It assists the engine when the vehicle is driving at a constant speed (on main highways, for example) in order to cut fuel consumption.
- It delivers a boost effect to the engine when accelerating.
- It allows the car to be driven in 100% electric mode over short distances.

Made at Valeo's plant in Étampes, northern France, one of the largest electric machinery factories in Europe, the iBSG system has already been installed in several hundred thousand vehicles, including applications for Asian, German, British, and French vehicles

An environmental challenge for Valeo

With its iBSG system, Valeo is actively contributing to the electrification of vehicles. The Group produces 30 million electric machines every year, confirming its long-standing know-how in the production of electric systems, while also providing an effective response to today's environmental and legislative issues.

The plant in Étampes currently produces almost 30,000 electric machines per day, and it is continuing to ramp up its capacity to produce 48V systems in response to the strong demand from carmakers. In May 2020, French president Emmanuel Macron chose the Étampes site to unveil his government's plan to support the automotive industry by making it more ecological and more competitive.

Fifteen iBSG 48V part numbers are now available on the aftermarket for auto repair specialists.

* in comparison with a stop-start system - WLTP standard

Resource-saving and inexpensive repair option for the Electric Park Brake



The TRW Electric Park Brake (EPB) has become standard equipment in most vehicle classes in recent years, causing increasing aftermarket demand. However, more and more car owners are looking for an affordable alternative to the complete replacement of the EPB brake caliper. ZF Aftermarket's TRW brand now meets this need with the new actuator repair kit.

Like many other comfort features, the Electric Park Brake was first established in the upper vehicle classes but is increasingly now being used in volume models. Its advantages are impressive:

- Increased driver comfort;
- Interior designers are given more freedom; and
- New driver assistance functions become possible.

Although the EPB variations with actuator integrated into the brake caliper are very reliable and durable, damage can still occur – as with any technical system. Workshops should make use of ZF Aftermarket's extensive product range for repairs. Under the TRW brand, ZF's aftermarket organisation offers spare parts for virtually all brake repair cases. A new service-oriented product has now been added to the EPB portfolio.

Until now, workshops have had to replace the entire EPB brake caliper, even if only the actuator was defective. The

electric actuator can fail even if the mechanical part of the brake caliper is still intact. This is why ZF Aftermarket now offers the new actuator repair kit as a low-cost and resource-saving alternative to complete replacement.

The kit consists of the electric actuator, two fastening screws and an O-ring, with which the EPB can be repaired in a short time and at low cost for the customer. The actuator repair kit is available for the following models:

- Audi A3, A4, A5, A6, A7, A8, TT, Q3, Q7, Q8
- BMW 5 series, X3, Z4
- Jaguar F-Type Convertible
- Seat Ateca, Leon, Alhambra
- Skoda Karoq, Kodiaq, Superb
- Volkswagen Golf VII, Passat, CC, Arteon, Tiguan, Touareg



KEY FACTS

ZF's low-cost and resource-saving actuator repair kit offers an alternative to complete brake replacement.

EPB spare parts for many new models

ZF Aftermarket has also extended its range of complete TRW EPB brake calipers. New to range are versions for the following models:

- Audi A4, A5, A6, A7, A8 as well as Q3, Q5, Q7, Q8 and R8.
- BMW 8 Series Coupé/Gran Coupé/Convertible

The brake calipers are available in the same colours as used in the original equipment (OE) - for example: black, red, grey, and ultramarine.

Coloured brake calipers for many vehicle models

Furthermore, some vehicle manufacturers use an attractive colour design not only for the Electric Park Brake, but also for the caliper of the service brake. Therefore, ZF Aftermarket also offers a wide range of coloured brake calipers. They can be fitted to many models from the Volkswagen Group, but also to cars from Mercedes-Benz, BMW, Alfa Romeo, Fiat, Peugeot, and Land Rover.

TRW spare parts for prestige models

The product range of the world's leading brake supplier also includes spare parts for luxury cars and sports cars. High-performance and high-quality brake calipers in the OE colour are available under the TRW brand for sports cars such as the Lamborghini Gallardo and the Mercedes-Benz SLC, and also for powerful SUVs such as the Range Rover Sport and for top sports models such as the Audi S6 or BMW M8.

Commuter habits in a post-pandemic world

Will mass transit lose its steam? Studies are showing that COVID-19 has and may continue to cause a shift in transportation preferences.

It is no surprise that the COVID-19 pandemic has resulted in a shift in commuter preferences. Several surveys have reported large decreases in the number of people using public transit. A global survey by transit app, Moovit, dug into this topic and found that more than half of Americans are using public transit less or not at all. The same study found that in the Greek city of Thessaloniki, 34.3% of people no longer use public transit, while 45% said their use has reduced.¹ On the other hand, about 49% of commuters in Spain reported their use of public transit remained the same, or even increased, despite the pandemic.² Another report by British automotive-services company, RAC, found that reluctance in public transport was at its highest level in 18 years. According to the findings, 54% of respondents said safety was of top consideration, but 43% of people agreed that they would use their cars less if public transit was improved.³ In the studies looked at, there were several common threads in people's decision making.

What are commuters concerned with?

The fear of infection was, by far, the primary concern. In Thessaloniki, the Moovit study found that 61.5% of commuters said they would want transit vehicles, stations,

and stops to be disinfected. Additionally, 70% of respondents in the region desired to have more buses on the road to decrease the chances of vehicles being too crowded.⁴ In Singapore, 43% of people expressed interest in being able to access data on how crowded a public transit vehicle is before getting on board, while 46% of those surveyed in the United States expressed interest in mobile payments.⁵

In response to concerns, some countries are looking at ways to quell fears and, simultaneously, contain the spread of the virus. In South Korea, smart bus stops only allow people to enter the bus after their temperature has been checked, showing 37.5°C or below.⁶ Interestingly, studies in France, Japan, and Austria that looked at the first wave of the COVID-19 pandemic have found that there is very little evidence that connects major coronavirus outbreaks to buses or trains. In fact, they showed that, with measures like social distancing and mask wearing, infections on public transit were very rare.⁷

Emissions considerations and environmental implications

Irrespective of studies that show COVID-19 infections from using public transit were low (with precautionary measures being taken), reluctance to hop back on the bus still exists. According to Auto Trader, a dig-

KEY FACTS

The COVID-19 pandemic changed commuter habits, but will sanitary enhancements get riders back on board? And what does this mean for the automotive industry?

ital marketplace for cars, between June and September 2020, 15% of its website audience were aged 18-24, compared with just 6% during that same period in 2019.⁸ Additionally, according to New York's Metropolitan Transportation Authority (MTA), new car registrations in the city rose by 18% compared with 2019 levels.⁹

With people across all age cohorts gravitating towards cars more than usual, what impacts will this have on emissions reduction commitments? Time will tell. But, with more people behind the wheel, there are likely to be some longer-lasting environmental implications due to this shift in travel habits worldwide.

What does the future have in store?

It's not surprising that some industry experts say public transport must take on a central role for sustainable, climate-friendly mobility.¹⁰ In terms of ridership and commuter demands, PwC survey respondents mention digitalisation, innovative payment systems, and alternative forms of power as having increasing importance to them when it comes to public transit.¹¹

But, will such enhancements really get people back on board? And what does this mean for the automotive industry and parts suppliers in particular? Whether parts suppliers service the public transit market or not, these notions should be kept top of mind as the future of transportation and commuter preferences continue to evolve.

¹ COVID made many of us avoid public transport – what will it take to get us back on the bus? World Economic Forum, Sean Fleming, 04 February 2021. ² Ibid. ³ Why our reliance on cars could start booming. The Life Project – BBC Worklife, Mark Johanson, 03 December 2020. ⁴ SCOVID made many of us avoid public transport – what will it take to get us back on the bus? World Economic Forum, Sean Fleming, 04 February 2021. ⁵ Ibid. ⁶ Ibid. ⁷ Why our reliance on cars could start booming. The Life Project – BBC Worklife, Mark Johanson, 03 December 2020. ⁸ Ibid. ⁹ Ibid. ¹⁰ Blickpunkt Verkehr: Aktuelle Informationen rund um den ÖPNV (Focus on transport: Current information about public transport), PwC, Hansjörg Arnold and Christiane Henrich-Köhler, 01 April 2020. ¹¹ Ibid.

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