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MAGAZINE

## LOTUS EVIJA HYPERCAR

RETURNS TO THE MIDDLE EAST

**Confident Power**

All new 2022 Infiniti QX60

March - April 2021 issue/20 AED

## The New McLaren Artura

High Performance Hybrid Supercar

LONGINES®

Elegance is an attitude

Simon Baker


The Longines Master Collection

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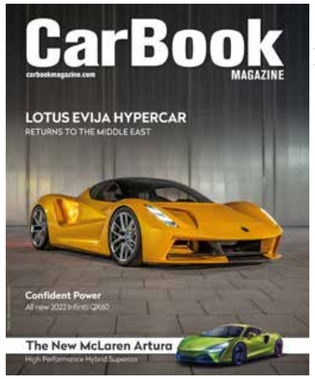


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# Lotus Evija hypercar

## Returns to the Middle East

The Lotus Evija hypercar has returned to the Middle East for a month-long tour of the region.

It previously visited Dubai and Abu Dhabi in September 2019 as part of a world tour that included North America, Japan and China. The car's appearance was a huge success with numerous VIP private viewings and several customers committing to buy.

However, with opportunities to see the Evija – the world's most powerful series production road car – curtailed in 2020 due to travel restrictions, Lotus has brought it back to the Middle East for the month of March. Working closely with retail partner Adamas Motors, it will star as the stunning centrepiece at the opening of the new Lotus showroom in Dubai.

The car's return provides the opportunity for many more private viewings, and is a clear show of support for customers in the Middle East who have ordered their own Evija.

As well as being hosted at the new Lotus Dubai showroom, the car will be at the Lotus showroom in Abu Dhabi and the all-new facility in Bahrain. Again, numerous VIP viewings for potential new customers are already planned.

The diary of events for the Lotus Evija is:*

- March 1-9 Dubai, United Arab Emirates
- March 10-15 Abu Dhabi, United Arab Emirates
- March 24-31 Manama, Bahrain

Jonathan Stretton, Regional Director, Lotus Middle East, commented: "We are delighted to be bringing the Lotus Evija hypercar back to the Middle East with the support of our retail partner Adamas Motors. It is the perfect way for us to celebrate the opening of the new Lotus retail outlet in Dubai."

He added: "The passion for performance cars in the Gulf States is well known and the interest in the Evija is testament to the power and increased awareness of the Lotus brand, and the commitment of customers to embrace the move towards electrification."

Karl Hamer, CEO Adamas Group commented: " We are very honoured to have the Evija returning to the UAE in time for the opening of our wonderful new Lotus Car Showroom in Dubai. The Evija is just the beginning of what the future will hold for Lotus Cars and we at Adamas Motors are extremely exited for the journey ahead. With the opening of our wonderful showroom on Sheikh Zayed Road, the building covers 30 000 sqft, also housing our group head office , Lotus showroom, Café, Boutique and a lovely customer recreational area. What a beautiful place to host one of the powerful hyper cars and I am so pleased to welcome our customers and potential Evija prospects

over the next coming weeks in both UAE and Bahrain. This development follows on from our success in Hong Kong and the next stage development for our multi franchise operations in the Kingdom of Bahrain, which will host Lotus Cars, Aston Martin, Morgan Motors and one other franchise to follow, housed in the high-end fashion parade Moda Mall / Bahrain International Financial Center. We are so proud to share this journey with everyone, Mr Hamer continues.

The new Lotus Dubai showroom is located on Sheikh Zayed Road – less than a mile from the original outlet on the same street – but offers considerably more space and opportunities.

A bold statement of intent from the iconic British performance car company, the all-electric hypercar has a power output in excess of 2,000 PS and an astonishing 0-186mph (300km/h) time of under nine seconds.

# McLaren unveils all-new next-generation

## High-Performance Hybrid supercar - the McLaren Artura

The all-new McLaren Artura is revealed, marking the beginning of both a new chapter for the pioneering luxury supercar company and a new era in supercar technology and performance.

McLaren's first series-production High-Performance Hybrid supercar focuses more than half a century of the company's racing and road-car experience and expertise into a next-generation supercar that blends ground-breaking technology with McLaren's dedication to pure driver engagement.

Underpinned by the McLaren philosophy of super-lightweight engineering, the all-new Artura is the distillation of every attribute inherent in a McLaren – distinctive design, unrivalled performance, dynamic excellence and engineering innovation – with electrification now bringing the additional benefits of even faster throttle response, lower emissions and being able to run in pure EV mode for emissions-free journeys of up to 30km*.

All-new from the ground up, the Artura presented McLaren engineers and designers with new opportunities to innovate, chief among these being how to preserve McLaren's super-lightweight engineering philosophy when adding hybrid powertrain elements including an E-motor and battery pack.

A demanding programme of weight reduction, encompassing every area of the Artura from the chassis platform – this is the debut of the new McLaren Carbon Lightweight Architecture (MCLA) – through the uniquely compact HPH powertrain system to the weight of cabling used in the electrical systems (where a 10% reduction was achieved), resulted in the Artura having a lightest dry weight of 1,395kg*. The total weight of hybrid components is just 130kg (which includes an 88kg battery pack and 15.4kg E-motor), resulting in a DIN kerbweight of 1,498kg* which is on

par with comparable supercars that do not have hybrid powertrains, giving the Artura a super-lightweight advantage.

"Every drop of McLaren's experience and expertise has been poured into the Artura. Our all-new, High-Performance Hybrid delivers all of the performance, driver engagement and dynamic excellence for which McLaren is renowned, with the additional benefit of EV driving capability. The introduction of the Artura is a landmark moment – for McLaren, for our customers who will appreciate and enjoy this car on every emotional and rational level, and for the supercar world."
Mike Flewitt, CEO, McLaren Automotive

At the heart of the Artura's powertrain is McLaren's all-new, 2,993cc twin-turbocharged V6 petrol engine. With a power output of 585PS – nearly 200 PS per litre – and 585Nm of torque, the dry-sump aluminium engine is compact and lightweight; at just 160kg it weighs 50kg less than a McLaren V8 and is significantly shorter, enhancing packaging efficiency.

Designed to run with a Gasoline Particulate Filter to optimise emissions performance, the M630 engine is also extremely refined. The 120° v-angle of the engine, which allows the turbochargers to be positioned within the 'hot vee', delivers further advantages in packaging as well as contributing to a lower centre of gravity. The 120° layout increases engine performance by reducing the pressure losses through the exhaust system and allows for a stiffer crankshaft that enables a rev limit of 8,500rpm, maximising performance and driver engagement.

Working in harmony with the new V6 is the Artura's compact axial flux E-motor, located within the transmission bell housing. Smaller and more power-dense than a conventional radial flux E-motor, it is capable of generating 95PS and 225Nm and boasts a power density per kilo 33% greater than the system used in the McLaren P1™. The instantaneous nature of the motor's torque delivery – known as 'torque infill' – is key to the car's razor-sharp throttle response. Exhilarating 'off-the-line' performance sees the Artura achieve 0-100km/h (0-62mph) in just 3.0 seconds*, with 0-200km/h (0-124mph) taking 8.3 seconds* and 0-300km/h (0-186mph) 21.5 seconds*. Top speed is limited to 330km/h (205mph).

The dual propulsion systems are integrated via an engine disconnect clutch, driving an all-new, twin-clutch transmission, which has been developed specifically


for the Artura. Despite having one more ratio than the existing McLaren transmission – to optimise power and torque delivery – the lightweight, short-ratio gear cluster is 40mm shorter in length. It also requires no reverse gear – the E-motor takes care of reversing by literally rotating in the opposite direction.

The E-motor is powered by a battery pack comprising five lithium-ion modules, offering a usable energy capacity of 7.4kWh and a pure EV range of 30km*. The battery is refrigerant cooled using cooling rails, and the assembly – including a power distribution unit which transfers battery power from the rear of the vehicle to the ancillaries in the front – is mounted on a structural carbon fibre floor. This assembly is then bolted onto the rear base of the monocoque, optimising stiffness, weight distribution and crash protection.

The Artura is designed with full Plug-in Hybrid (PHEV) capability and can be charged to an 80% charge level in just 2.5 hours with a standard EVSE cable. The batteries can also harvest power from the combustion engine during driving, tailored to the driving mode selected.

The McLaren Artura is the first model to have the new McLaren Carbon Lightweight Architecture (MCLA) at its core. Designed and manufactured at the McLaren Composites Technology Centre (MCTC) in the Sheffield region, MCLA sets a new standard for McLaren's advanced flexible chassis design. Optimised for high-performance hybrid applications, it includes a bespoke battery compartment and introduces a ground-breaking domain-based ethernet electrical architecture, along with an electrical heating, ventilation and air-conditioning (eHVAC) system.

# Confident Power: All-new 2022 INFINITI QX60

## New -9speed automatic transmission, improved refinement

**QUIET CONFIDENCE IS THE BEST KIND.**

Building on the brand's promise to deliver a confident ride and capable performance in all its vehicles, INFINITI today announces the all-new 2022 INFINITI QX60's frontline combo for its upcoming luxury three-row crossover.

The 2022 INFINITI QX60 will be powered by the brand's award-winning 295-horsepower 3.5-liter V-6 engine mated to an all-new 9-speed automatic transmission. The duo aims to deliver an ideal balance of power and fuel economy, response and refinement from INFINITI's newest addition to the QX lineup.

"The upcoming, all-new 2022 INFINITI QX60 embraces the tenets of what our brand stands for," said INFINITI Chairman Peyman Kargar. "Teams from Japan and the U.S. have worked tirelessly to bring the new QX60 to customers as our most refined and advanced three-row crossover yet. The QX60 is a foundation for INFINITI and will bring to life our core philosophies. We'll have more to talk about soon, so watch this space."

Extensive testing and calibration for the engine and 9-speed combo in the all-new INFINITI QX60 will deliver to drivers a powerful but relaxing ride.

INFINITI teams across North America have logged thousands of hours and kilometers behind the wheel of the new QX60 to fine-tune the crossover's response, capabilities, ride and handling, and overall behavior.

Engineers from INFINITI's Arizona Testing Center have subjected the new QX60 to severe heat in places such as Death Valley, California, in temperatures above 50 degrees Celsius to test the QX60's cooling capabilities and interior environment.

Engineers at the facility have worked for years fine-tuning the QX60's cabin to be tranquil and relaxing, despite the brutal heat and punishing landscape.

Specialized testing challenges every component, whether it's the all-new 9-speed automatic transmission developed with supplier ZF or weather stripping around the windows — no detail is too small.

"The all-new QX60 has a direct and linear acceleration feel. It gives the driver confidence to not only increase their standing start but also passing on the freeway and in the city," said Dave Kiesel, manager of powertrain performance at INFINITI's Arizona Testing Center.

"You just step on the pedal, it downshifts, and you go. "The all-new 9-speed has a larger ratio spread — almost 10:1. This gives the customer the ability to have a standing start performance that is confident and responsive. The corollary of that is also that you maintain your fuel economy on the freeway," Kiesel added.

With a wider spread of gear ratios, INFINITI engineers have improved more than performance metrics; ride comfort is also enhanced. Imperceptible gear changes by the new 9-speed automatic are complemented by INFINITI's Active Torque Mount that isolates engine vibrations outside the cabin and quiets the interior.

Inside, INFINITI's shift-by-wire system opens up more usable space inside and around the center console.

One good use for that improved and functional space: INFINITI's Drive Mode Selector that shuttles between five selectable modes — Standard, ECO, Snow, Sport, and Personal — to customize each drive.

In all, the combined attributes from the powerful 3.5-liter V-6 and refined 9-speed automatic transmission aim to deliver a serene atmosphere that QX60 buyers will demand.

More details about the all-new 2022 INFINITI QX60 will be revealed soon.

# THE POWER OF CHOICE:

## POTENT NEW DEFENDER V8 AND EXCLUSIVE


**SPECIAL EDITIONS JOIN THE RANGE**

Land Rover has launched the powerful Defender V8 as part of a range of enhancements to its unstoppable and award-winning 4x4 family. The new 525PS Defender V8 and flagship Defender V8 Carpathian Edition provide a unique combination of performance and capability, with bespoke chassis settings delivering new levels of driver engagement and agility both on and off-road.

The powerful new models build on decades of Land Rover V8 heritage – spanning the original Stage I V8 of the Seventies, North American Specification models of the Nineties and powerful Defender Works V8 – as the characterful engine joins the latest range of efficient Ingenium petrol, diesel and advanced Plug-in Hybrid Land Rover powertrains.

The V8 petrol engine isn't the only introduction. There's also a new XS Edition, fresh exterior design packs that provide greater personalisation potential and an optional larger 11.4-inch Pivi Pro infotainment touchscreen.

Defender V8 builds on the rugged 4x4's class-leading capability, delivering new levels of performance and driver engagement by combining a powerful 525PS 5.0-litre V8 supercharged petrol engine with expertly developed suspension and transmission tuning to create the fastest and most dynamically rewarding Defender yet.

The exclusive new Carpathian Edition is based on the Defender V8 and represents the ultimate expression of Defender design, performance and capability, while a new XS Edition replaces the hugely successful First Edition and combines bespoke design and specification enhancements inside and out.

Defender's personalisation potential has also been expanded with the introduction of new exterior packs. The Bright Pack, Extended Bright Pack and Extended Black Pack feature bespoke exterior trim to enhance Defender's unmistakable silhouette.

Heightened connectivity is also part of the updates. Defender's state-of-the-art Pivi Pro touchscreen infotainment is now available with a range of desirable new features, including the option of a larger 11.4-inch touchscreen display*. Wireless device charging with integrated signal booster is now fitted as standard with



the Comfort and Convenience Pack for improved convenience and call quality.

**David Hemming, Chief Product Engineer, Jaguar Land Rover, said:** "The introduction of our V8 powertrain adds a new dimension of driving engagement and off-road capability to Defender. Fast and fun to drive, it represents the pinnacle of the Defender family and is as rewarding on the road as it is capable off it. We've also broadened the appeal of the entire Defender line-up with new derivatives, option packs and enhanced connectivity, so there really is a Defender for everyone."

**NEW DEFENDER V8**

New Defender V8 is the ultimate expression of Land Rover's toughest 4x4 and recalls the rich heritage of eight-cylinder Land Rovers dating back to the 1970s. The potent new V8 supercharged engine is available in both 90 and 110 body designs and delivers elevated performance and driver engagement without compromising Defender's unstoppable capability. With unique suspension and transmission tuning, including bespoke spring and damper rates and a new Electronic Active Rear Differential, it delivers more agile and engaging handling with heightened body control – all accompanied by a characteristic V8 soundtrack.

**Power comes from Land Rover's 5.0-litre V8** supercharged petrol engine, which produces 525PS, 625Nm of torque and drives through an eight-speed automatic transmission. The Defender V8 90 accelerates from 0-60mph in just 4.9 seconds (0-100km/h in 5.2 seconds) with a top speed of 149mph (240km/h) and delivers fuel consumption of up to 19.5mpg (14.5l/100km) with CO2 emissions from 327g/km**.

Exceptional off-road capability is a Defender hallmark and the V8 adds a new layer of driver appeal, with the introduction of a new Dynamic program within the Terrain Response system – only available on V8-powered Defenders. It helps drivers to exploit the more dynamic character and handling balance of the 525PS model on tarmac and loose surfaces. Engineered to be the fastest and most engaging production Defender ever, it delivers unrivalled agility and driver appeal.

**Iain Gray, Senior Manager, Powertrain Advanced Engineering, Jaguar Land Rover, said:** "The 5.0-litre V8 supercharged engine further enhances the unique character of the Defender. It sounds fantastic and delivers incredible performance – providing new levels of driver appeal. Our engineering focus has been to optimise powertrain calibration for Defender to deliver both responsive on-road performance and fine control off-road – all without compromising Defender's unstoppable all-terrain capability and wading ability."

Larger-diameter and solid anti-roll bars help reduce body roll in extreme cornering, while the unique Electronic Active Rear Differential introduces a Yaw Controller that allows fine control of the Defender V8's cornering attitude as it reaches and exceeds the limit of grip.

Careful calibration of the new Dynamic program in Terrain Response 2, gives Defender V8 a more agile, playful and responsive character. In this setting,

a sharper throttle response and bespoke tuning for the Continuously Variable Damping combine with the stiffer suspension bushes for immediate steering responses. Working in harmony with the Torque Vectoring by Braking technology, Traction Control Systems and new Yaw Controller, the Defender V8 is faster, more engaging and more controllable than ever.
Instantly recognisable, the Defender V8 features a number of unique exterior enhancements; bespoke exterior badging, quad exhausts with distinctive tailpipes and unique 22-inch alloy wheels with a Satin Dark Grey finish combine to set the most powerful model in the line-up apart. The Defender V8 is further identified by its Xenon Blue brake calipers and 20-inch brake discs.
Careful acoustic tuning of Defender V8's induction and exhaust systems provides a purposeful and authentic sound. Calibrated to suit every driving situation, this evocative soundtrack can be enhanced by selecting Dynamic program in the Terrain Response system.
Customers have a choice of three colours – Carpathian Grey, Yulong White and Santorini Black – Carpathian Grey and Yulong White with a contrast roof in Narvik Black. Shadow Atlas exterior detailing completes New Defender V8's distinctive exterior finish.
Inside, Defender V8 features seats trimmed in unique Ebony Windsor Leather with Miko Suedecloth and Robustec accents, each finished with a unique Ebony tag, while the Defender's exposed Cross Car Beam has a special Satin Black finish. The four-spoke steering wheel is enhanced by an Alcantara rim and tactile satin chrome gearshift paddles, which are unique to V8 models. Leather covers the airbag housing and gear lever, while illuminated treadplates are completed with a V8 script.

**DEFENDER V8 CARPATHIAN EDITION**

The exclusive new Defender V8 Carpathian Edition is the ultimate expression of performance, durability and design, and represents the very pinnacle of the Defender range. Finished exclusively in Carpathian Grey, it is distinguished by a Narvik Black contrast roof, bonnet and, for the first time on New Defender, taildoor. Additional visual highlights include bespoke V8 Carpathian Edition badging finishes, Satin Black towing eyes and distinctive Xenon Blue brake calipers.
The unique exterior is finished with Land Rover's Satin Protective Film. The recyclable PU-based wrap is applied to external bodywork giving the 4x4 a contemporary semi-matte finish that also protects against everything from car park scratches to off-road bramble rash.
Inside, the Defender V8 Carpathian Edition features the same upgrades as the V8, with seats finished in Miko Suedecloth and Robustec accents, an Alcantara-wrapped steering wheel and illuminated treadplates.

**DEFENDER XS EDITION**

The new XS Edition replaces the hugely successful First Edition. Positioned above the SE models, it features a unique exterior and interior treatment and is available in both 90 and 110 body designs.
Externally, the XS Edition is identified by its bespoke body-coloured lower cladding and lower wheel arches, and distinctive 20-inch, contrast diamond-turned alloy wheels finished in Satin Grey. A choice of four exterior colour options is available: Silicon Silver, Hakuba Silver, Gondwana Stone and Santorini Black.
Inside, the XS Edition's 12-way, heated and electric memory seats are finished in Grained Leather, while the Cross Car Beam has a Light Grey powder coat brushed finish. Illuminated metal treadplates complete the interior.
Comprehensive standard specification includes Electronic Air Suspension, Adaptive Dynamics and Configurable Terrain Response. In addition, the XS Edition benefits from Matrix LED headlights with signature DRL, ClearSight Rear View mirror technology and the state-of-the-art Pivi Pro infotainment system with 10-speaker Meridian sound system.
The XS Edition is available with a choice of powerful and efficient powertrains, including the P400 petrol, P400e Plug-in Hybrid Electric Vehicle (PHEV) and D250 Mild Hybrid Electric Vehicle (MHEV) diesel.

**PIVI PRO UPGRADE**

New for 2022 model year, Defender is available with wireless device charging, which features a signal booster for optimised network reception and Wi-Fi signal.
Connectivity is also enhanced by the latest evolution of Pivi Pro infotainment, available with an optional larger 11.4-inch touchscreen* for the first time. The new curved glass interface is 60 per cent larger than the standard screen, making it even easier to follow navigation route guidance. The fast and intuitive Pivi Pro system provides immediate responses, even when starting the vehicle for the first time.
A simple menu structure allows the most commonly used functions to be accessed directly from the home screen to reduce driver distraction. The system can be easily customised to suit the preferences of individual customers. Additional app 'panels' can be added, moved and removed, while swiping left or right of the screen quickly reveals the most relevant information at a glance, ensuring the driver's concentration stays on the road.
The advanced navigation uses self-learning algorithms and dynamic guidance to optimise routing, while Smart Voice Guidance knows to cancel audio instructions in familiar surroundings. Navigation mapping is always up-to-date thanks to Defender's Software-Over-The-Air (SOTA) technology†.
Intelligent learning allows the navigation system to identify routes customers use regularly, even without inputting a destination, and use this information to inform drivers of the fastest route to their likely destination based on current traffic conditions. If a faster route becomes available, Pivi Pro will propose this as an alternative.
Greater personalisation with new Exterior Packs
Customers can now choose from three new exterior design packs. The Bright Pack, Extended Bright Pack and Extended Black Pack further extend the personalisation potential of New Defender.
Available on all Defender models, the Bright Pack features a Noble Chrome finish for the front and rear skid plates, plus a Noble Chrome Grille bar and badging. The Extended Bright Pack, adds Ceres Silver to the lower body cladding and wheel arches.
Defender X, Defender X-Dynamic and Defender V8 customers can select the new Extended Black Pack. It provides a Gloss Black finish for the front and rear skid plates, grille bar, bonnet chequer finisher, , badging, lower body cladding and wheel arches for a stealthy and purposeful appearance.


# HYUNDAI MOTOR REVEALS

## ALL-NEW BAYON, A STYLISH AND SLEEK CROSSOVER SUV

Hyundai Motor revealed Hyundai BAYON today, an all-new crossover SUV designed specifically for Europe. As a B-segment SUV, BAYON will be the latest and smallest member of Hyundai's expanding SUV family. The all-new BAYON features a compact exterior, a roomy interior, and a long list of intelligent safety and connectivity features which make it stand out in its segment. With this, the all-new BAYON democratises technology, making high-tech safety and connectivity features accessible for all.

In line with Hyundai's existing SUV naming strategy, BAYON's name was inspired by a vacation hotspot: Bayonne, the capital of the French Basque Country and one of the most beautiful destinations in the south-west of France. As BAYON is designed to meet the demands of the European market, the company decided to give it a European name.

"As the SUV body type continues growing in popularity throughout the world, Hyundai saw a demand for a model capable of navigating European cities while at the same time providing enough space to meet customers' needs," says Andreas-Christoph Hofmann, Vice President of Marketing & Product at Hyundai Motor Europe. "Class-leading connectivity and safety features, a sharp and distinctive design, and the integration of Hyundai's signature 48-volt mild hybrid technology make BAYON stand out in its segment."

With BAYON, Hyundai has now launched or enhanced seven new models in just 12 months – or 20, counting all body types and powertrain variations making 2020 a record year for its fleet expansion.

**A SHARP AND DISTINCTIVE DESIGN**

BAYON is the latest design statement within the

Hyundai SUV family, distinctive through unexpected and eye-catching proportions and strong graphic features. Furthermore, it encompasses the Hyundai design identity Sensuous Sportiness, defined by the harmony between proportion, architecture, styling and technology. This latest interpretation of Sensuous Sportiness combines emotional values with innovative solutions. "With its sharp look and integration of Hyundai's SUV key design elements, BAYON solidifies Hyundai's SUV design direction," says Luc Donckerwolke, Chief Creative Officer at Hyundai Motor Group. "BAYON's unique and confident look, embodied in its strong lines and arrow-shaped lights, is expected to establish it as the most unique, outstanding entry in the thriving European B-SUV segment."

**EXTERIOR DESIGN**

BAYON is characterised by a distinctive exterior design that separates it clearly from its competition. Unique design solutions, high-tech looking details and a clean look elevate it from the crowd.

At the front, a wide grille opens at the bottom, creating a solid stance. Three-part main lights combined with air intakes establish a unique look and architecture. A horizontal air intake band and DRLs establish width, and a lower skid plate confirms its SUV identity.

On the side, a dynamic shoulder provides a wedge-shaped appearance. The arrow-shaped C-pillar provides dynamic and unexpected architecture. This, in combination with fender feature and cladding, defines its unique character.

To the rear, arrow-shaped lights underline the pillar dynamics. Their far-out position creates a wide stance. In addition, a thin horizontal line connecting the taillights further emphasises width and connects the rear and the side in one gesture. Angular lines above the rear arch emphasise volume, creating a vivid section. The strong rear section and visually extended rear window initiate a unique and expressive rear design. Full LED lights and indicators complete its modern look.

BAYON is available with 15-inch steel wheels or 16- or 17-inch alloy wheels.

A total of nine exterior colours are available, including a new launch colour, Mangrove Green. An optional two-tone roof in Phantom Black is also available with several exterior colours.

**EXTERIOR COLOURS:**

- Mangrove Green Pearl [launch colour] with optional Phantom Black roof
- Phantom Black Pearl
- Polar White with optional Phantom Black roof
- Sleek Silver Metallic with optional Phantom Black roof
- Elemental Brass Metallic with optional Phantom Black roof
- Dragon Red Pearl with optional Phantom Black roof
- Aqua Turquoise Metallic with optional Phantom Black roof
- Aurora Grey Pearl
- Intense Blue Pearl with optional Phantom Black roof

**A MODERN, DIGITAL INTERIOR**

BAYON features a clean, roomy, well-lit interior. There is a strong focus on maximising front and rear passenger comfort and increasing boot space. The interior is defined by a range of connectivity equipment, including a 10.25-inch digital cluster and a 10.25-inch AVN or 8-inch Display Audio. Occupants can benefit from LED ambient lighting technology integrated into the front passenger foot areas, door wells, and front door pull handle areas, as well as the storage area below the centre console.

A carefully-selected neutral range of interior colours

and materials provides maximum compatibility with the exterior colour range. A calm colour and trim concept with small and subtle accents creates a serene atmosphere which allows the driver to focus. BAYON comes standard with a Full Black cloth interior, with two other optional colour combinations available.

INTERIOR COLOURS TRIMS:

- Full Black
- Dark Grey + Light Grey
- Dark Grey + Safari Green stitching and inserts

Class-leading connectivity and technology

As with other Hyundai models, BAYON offers advanced connectivity technology rarely found in its segment. It offers a best-in-class digital cockpit and top-line infotainment features.

Passengers can choose between a 10.25-inch AVN screen or an 8-inch Display Audio. The 8-inch Display Audio includes wireless Apple CarPlay and Android Auto.

Two USB ports for the front passengers and one for the rear make it possible for up to three devices to charge simultaneously. One of the front ports also allows data transfer, enabling occupants to connect their phone to the vehicle's infotainment system. A premium Bose sound system completes the package, promising occupants a high-quality listening experience.

**AVAILABLE CONNECTIVITY EQUIPMENT:**

- 10.25-inch Audio Video Navigation (AVN)
- 8-inch Display Audio
- 10.25-inch digital cluster
- Apple CarPlay and Android Auto (Offered wirelessly with 8-inch Display Audio)
- Bose Premium Sound System
- Wireless charging pad
- Three USB ports

Hyundai Bluelink Connected Car services

In addition, BAYON is equipped with the latest Hyundai Bluelink upgrade, meaning users can benefit from state-of-the-art Connected Car Services. The latest Bluelink includes services such as Connected Routing and a new User Profile feature. New to this generation of Bluelink is Calendar Integration. This means the driver can mirror their Google or Apple calendar in the vehicle's infotainment system. If the calendar appointment also has an address, it can be imported directly into the vehicle's navigation system.

In addition, customers can locate, lock and unlock their car remotely using the Bluelink app, or check vehicle information such as maintenance required or fuel levels.

**BLUELINK AND LIVE SERVICES FEATURES:**

- **Connected Routing:** cloud-based navigation system that offers even more precise routes for daily driving
- **Live Parking Services:** now includes on-street parking price information in addition to availability of nearby parking space
- **Calendar integration:** drivers can sync their Google or Apple calendar with the car's infotainment system and navigate directly to appointments
- **Remote services:** drivers can lock/unlock their car and view vehicle status using the Bluelink app
- **Online voice recognition:** powerful online (cloud-based) voice recognition that can control vehicle functions such as heating and cooling
- **Find My Car:** drivers can locate their vehicle easily if they forgot where they parked
- **Send to car (POI):** search for local points of interest and send results to car's satellite navigation
- **Security:** Vehicle alarm notification
- **Maintenance:** diagnostics and vehicle report (e.g. tyre pressure and airbags), driving information

**ROOMINESS & CONVENIENCE**

Hyundai BAYON delivers the comfort and storage space of an SUV with the agility and fuel efficiency of a B-segment vehicle. Its compact exterior size and its family-friendly interior mean customers can enjoy the best of both worlds: while its compact size and excellent visibility make it easy to enter and easy to handle, it also offers that safe and robust feeling customers have come to expect from Hyundai SUVs thanks to its high seating position.

With 411 litres of boot space, BAYON stands out for its large amount of storage space, despite its compact size. As such, BAYON stands out for its roominess and usability. An intelligent trunk cover which can be slid along the rear of the back seat to cover the cargo brings an added benefit.

At 4,180mm long, 1,775mm wide, and 1,490mm tall (or 1,500mm with 17-inch wheels), its dimensions strike a perfect balance between compactness and convenience. It features a wheel base of 2,580mm. Excellent legroom will also ensure passengers experience a comfortable ride, whether they're sitting in the front seats or in the rear: front passengers can enjoy 1,072mm of leg room, while rear passengers have 882mm.

As a true SUV, BAYON offers a ground clearance of up to 183 mm (in combination with 17" wheels), higher than most other vehicles in the B-segment.

**A BEST-IN-CLASS SAFETY PACKAGE**

BAYON shares its safe and robust DNA with the other members of the Hyundai SUV family, and it has the safety features to match. Another way it stands out in its segment, BAYON offers an extensive list of Hyundai SmartSense safety features. Many of them are included in the standard equipment already.

A number of semi-autonomous driving features set BAYON apart from its competitors. Lane Following Assist (LFA) works to keep the vehicle centred in its lane. Forward Collision-Avoidance Assist (FCA) first sounds an alarm, then, if necessary, applies the brakes to prevent a collision from occurring. This feature includes car, pedestrian and cyclist detection, as well as Junction Turning, which can apply the brakes to prevent a collision with an oncoming car when turning left at an intersection. Another advanced feature, Navigation-based Smart Cruise Control (NSCC), uses data from the vehicle's navigation system to adjust speed autonomously when driving on a highway or expressway.

BAYON also includes several features that gently redirect the driver's attention when their focus slips. Driver Attention Warning (DAW) analyses driving patterns to help detect drowsy or distracted driving. This system works in tandem with Leading Vehicle Departure Alert (LVDA), which alerts the driver when the vehicle ahead of them starts moving forward and they do not react quickly enough. In addition, Rear Occupant Alert (ROA) notifies the driver before leaving the vehicle if sensors detect movement in the back seat. This makes BAYON even safer for rear passengers, including children or pets, making it a great choice for families.

Still other features ensure safety when driving at low speeds, or when parking. Parking Collision-Avoidance Assist-Reverse (PCA-R) provides a warning and, if necessary, applies the brakes when a rear obstacle is detected when the car is reversing slowly. Rear Cross-Traffic Collision-Avoidance Assist (RCCA) assists drivers in a similar manner when they are backing out of a parking space and another car passes by. And Parking Assist (PA) allows for semi-autonomous parking, with a range of sensors and software working together to help drivers get into tight spaces.

In case of an accident, eCall will automatically alert emergency services if the vehicle's airbags are deployed. Alternatively, occupants can also activate this feature with the press of a button.

# MITSUBISHI MOTORS INTRODUCES

## ALL-NEW 2022 OUTLANDER

As part of a game-changing collaboration with Amazon, MITSUBISHI MOTORS CORPORATION (MMC) today revealed the all-new 2022 OUTLANDER crossover SUV via livestream, the first vehicle to ever debut on Amazon Live.2 All-new from the wheels up, the 2022 Outlander features a new design direction for both this vehicle and the brand, plus the premium quality, rugged performance and innovative technology expected of a Mitsubishi Motors vehicle.

The flagship of the Mitsubishi Motors line, it is reimagined and reinvented in every way, and is the best-equipped, most thoughtfully engineered vehicle the company has ever developed. Outlander gears up for sale in North America first in April 2021, with other global markets to follow.

With a U.S. Manufacturer's Suggested Retail Price starting at $25,7951, the all-new 2022 Mitsubishi Outlander delivers the equipment, quality and lasting value that Mitsubishi customers have come to expect of the brand. Full pricing and packaging details will be made available at a later date.

The Outlander was first launched in North America in 2002, and this new model is the fourth generation to be sold.

Styling debuts the brand's next generation Dynamic Shield front face and design language, with muscular fenders, bold proportions and available large-diameter 20-inch wheels. Inside, Outlander is a quiet and serene space, showcasing quality and convenience


through class-above materials, seating for seven in the segment's only standard-equipment third-row, available 12.3-inch digital instrument cluster and 9-inch center screen, and also newly available wireless smartphone charging capability with Android Auto3 and wireless Apple CarPlay.4

The engineering underpinnings are also all-new. Partnered with a newly developed platform and 2.5L four-cylinder engine, Mitsubishi's rally-derived Super All-Wheel Control5 system provides unmatched confidence for drivers in all environments. The newly developed drive mode selector allows performance and grip to be tailored to the conditions through six distinct settings, increasing on-road and off-pavement performance. Even two-wheel drive models are fitted with the drive-mode selector, offering five distinct modes in this setup, to help drivers feel more confident in all driving conditions.

Standard equipment on the 2022 Outlander includes 11 airbags6, three rows of seats, myriad storage locations, USB-A and USB-C charge ports and 18-inch wheels.

Depending on trim level, the 2022 Outlander can be fitted with 20-inch wheels, Mitsubishi's MI-PILOT Assist driver assistance system with adaptive cruise control and lane-keep 7, semi-aniline leather seating, integrated navigation, a windshield-display 10.8-inch full-color Head-Up Display (HUD), Mitsubishi's industry-leading Mitsubishi Connect smart-car system, and a 10-speaker BOSE® audio system.8

Mitsubishi Motors North America is in the midst of introducing a full showroom of redesigned, reengineered or all-new vehicles, and the 2022 Outlander is the culmination of that program. This much-anticipated vehicle is here, and the game-changing launch is well under way. The all-new 2022 Mitsubishi Outlander is set to break boundaries, reset expectations and demand attention.

# THE ELECTRIC GRAN TURISMO:

## INTRODUCING THE 2022 AUDI E-TRON GT AND RS E-TRON GT


Looking every bit a concept car brought to reality, the 2022 Audi e-tron GT is a dynamic work of art. Long, low, wide, and exhilarating, it is a grand turismo that further expands Audi's prominent role in electric mobility.

Its classically beautiful design proportions are accentuated by large wheels, a wide track, , and long wheelbase – lower and wider than the Audi A7 while maintaining approximately the same length. Aesthetics arise from efficiency; an inverted Singleframe grille reinterprets honeycomb design elements, distinctive quattro blisters above each wheel, and a flat greenhouse with sloping roofline define e-tron GT design.

Coupled with radiator and brake duct air inlets that can close when not needed to optimize aerodynamics, drag coefficient is a low 0.24, helping the e-tron GT move with efficiency in complement with its velocity.

**OTHER DESIGN HIGHLIGHTS:**

- U.S. models will come to market with standard 20-inch 5-double-spoke alloy wheels with gray ac cents; vehicles equipped with the performance pack

age have 20-inch 5-double-spoke alloy wheels with black accents; the RS e-tron GT comes with standard 20-inch 5-spoke AERO wheels or available 21-inch wheels

- Standard for RS e-tron GT models is a lightweight, high-strength, five-layer carbon fiber reinforced plastic roof – a first for an Audi vehicle and a seg ment-exclusive feature
- Available HD Matrix-design headlights with Audi laser light for greater high-beam visibility
- Strongly chiseled lower doorsill lines that emphasizes the battery pack as the car's powerhouse and foundation
- Inside, standard is a leather-free interior featuring recycled materials; Dinamica® and Alcantara come standard; Nappa leather is available
- The "monoposto" cockpit angles the 12.3-inch Audi virtual cockpit and 10.1-inch MMI touch response displays toward the driver
- Standard is a full-circumference, flat-bottom steering wheel, wrapped in Alcantara; a perforated, leather-wrapped steering wheel and capacitive hands-on detection are available

**INTELLIGENT PERFORMANCE**

The Audi e-tron GT is defined by its duality: A high-performance gran turismo that can be just as easily driven spiritedly as it can be in leisure. The Audi RS e-tron GT, the first EV from Audi Sport sold in the U.S., expands this dual personality. Key to this characteristic are its electric propulsion system, three-chamber air suspension, all-wheel steering, and two-speed transmission.

**PERMANENT EXCITEMENT**

An element of performance the Audi e-tron GT shares with the world's most thrilling roller coasters also contributes to its exhilarating performance: permanently excited magnets. Found in both the front and rear axles of the e-tron GT and RS e-tron GT, permanently excited synchronous motors (PSM) are ideal for the e-tron GT thanks to the motors' ample, instant torque from a standstill. The e-tron GT produces 235 horsepower at its front motor and 429 horsepower at its rear motor. The motors' net combined output is 469 horsepower, or up to 522 horsepower with overboost for 2.5 seconds with launch control, and 464 lb-ft of torque (472 lb-ft with overboost). This allows the e-tron GT to repeatedly accelerate from 0-60 mph in 3.9 seconds on the way to a top track speed of 152 mph.

The RS e-tron GT shares its front motor with the entry e-tron GT but has a more powerful rear motor, capable of producing 450 horsepower. Together, the front and rear motors in the RS e-tron GT produce a net 590 horsepower and up to 637 horsepower with overboost. Total system torque is 612 lb-ft. As a result, the RS e-tron GT can accelerate from 0-60 mph in 3.1 seconds and has a 155 mph top track speed. That places the acceleration of RS e-tron GT on par with the V10-powered Audi R8 supercar – all while generating zero direct emissions.

A unique feature in contrast to much of the Audi electric grand tourer's competition is its two-speed transmission, providing the e-tron GT with rapid acceleration when it is needed and a taller second gear for sustained highway stretches.

*Net combined horsepower and torque ratings according to SAE calculations.

**AIR APPARENT**

The Audi e-tron GT comes standard with a three-chamber air suspension. Compared with the air suspension found in the e-tron and e-tron Sportback models, the new air suspension has a 60% greater capacity, which allows its duality in performance to further shine. Through this application, a wide variation in spring rates between the softest and firmest settings is achieved, providing comfort in daily driving or nimble reflexes tuned on the rigorous Nürburgring Nordschleife racetrack.

The three-chamber air suspension enables comfortable basic suspension and can adjust the body to different heights – 22 millimeters (0.9 in) downward and 20 millimeters (0.8 in) upward. The chambers in each spring can be activated and deactivated individually to suit the driving situation, and they work closely together with the controlled dampers (standard). Both systems are managed by a central control unit, the electronic chassis platform (ECP).

**TURNING POINT**

Available in e-tron GT models and standard in RS e-tron GT models, all-wheel steering provides a maximum of 2.8 degrees in the rear – in the opposite direction up to a speed of around 30 mph to increase low-speed agility, and in the same direction above approximately 30 mph to aid stability at speed.

A standard rear differential lock with fixed locking values assists during various thrust and traction scenarios. It is designed to improve traction and stability and help reduce load change reactions; minor brake and steering interventions on the wheels round off its work. The controlled rear-axle differential lock is available as an option on e-tron GT and is standard in the RS e-tron GT. The multi-plate clutch is its core element. It can be actuated variably, and the locking range extends from zero to 100%. The driver can perceive this on slippery road surfaces and during maximum full-stop braking – in this case, the lock opens up completely, allowing the Electronic Stabilization Control (ESC) to brake each wheel with great precision.

**BATTERY AND CHARGING**

All Audi e-tron GT models in the U.S. will benefit from a 93.4 kWh lithium-ion battery pack, with a unique integrated cooling structure underneath the battery pack. This draws heat away from the battery pack and allows the battery to be housed within an aluminum frame designed for structural rigidity and to protect occupants.

With an 800-volt electrical architecture, the e-tron GT comes standard with the ability to charge at an industry-benchmark 270 kW using DC fast-chargers. This allows it to replenish its battery from 5-80% in just 22.5 minutes – among the quickest charging rates currently available of any EV. Preliminary manufacturer's estimated ranges based on approximation of EPA test cycles for a full charge are 238 miles for the e-tron GT and 232 miles for the RS e-tron GT. EPA estimates not yet available at this time.

Precision and quality

Uncompromisingly high-quality, the Audi e-tron GT and RS e-tron GT models are assembled in the Böllinger Höfe plant alongside the Audi R8 supercar. Production of the Audi e-tron GT uses 100% eco-electricity, with a combined heat and power plant fired with biogas providing the necessary heat for the Böllinger Höfe. Emissions that cannot yet be avoided are compensated with carbon credits from certified climate protection projects.

In the process of creating the latest flagship in the e-tron family, no detail was too small, from design and manufacturing to responsible materials used and even the unique acceleration sound that audio engineers created specifically for the electric performance vehicle.

**AUDI'S ELECTRIFICATION COMMITMENT**

The Audi e-tron GT and RS e-tron GT represent the third and fourth all-electric additions to Audi's U.S. portfolio and contribute toward its goal of achieving a 30% electrified model portfolio by 2025, including fully electric vehicles and plug-in hybrids. In addition to the e-tron and e-tron Sportback, a fifth EV – the Audi Q4 e-tron – is anticipated to join the Audi model range in the coming year.

# ROLLS-ROYCE - KOA PHANTOM

## – A Rare Commission Of True Luxury

The Koa Phantom is the first Rolls-Royce Phantom that incorporates Koa Wood, a rare species of tree that grows only on Hawaiian soil. The inspiration derives from Mr. Smith and his wife Laura's love for the warmth and character of Koa Wood, having spent significant amounts of time in Maui, Hawaii.

In a world often dominated by luxury commodities designed for mass consumption, the commission of a Bespoke Rolls-Royce Phantom Extended exemplifies the notion of true luxury. A collaboration between the client and Rolls-Royce Bespoke Design team prompts a union of master craftsmanship with the finest materials, resulting in the creation of a deeply personal legacy. For the ultimate car enthusiast, Jack Boyd Smith, Jnr., this personal legacy is a Bespoke Phantom Extended featuring an unusual example of a rare species of Koa Wood.

Following three years of intense collaboration with the Rolls-Royce Bespoke Collective, consisting of designers, engineers and craftspeople based at the Home of Rolls-Royce in England, Mr. Smith's vision was realised. The Bespoke commission reflects both his personality and his love and passion for unique vintage motor cars. The one-of-a-kind creation joins his personal collection of more than 60 unique motor cars in The JBS Collection Museum. A great investment of time has enabled Mr. Smith to create a truly unique commission, one that undoubtedly will become a future classic.

The Koa Phantom is the first Rolls-Royce Phantom that incorporates Koa Wood, a rare species of tree that grows only on Hawaiian soil. The inspiration derives from Mr. Smith and his wife Laura's love for the warmth and character of Koa Wood, having spent significant amounts of time in Maui, Hawaii.

His ongoing connection to the Koa species is rooted deep within his family, as a Koa Wood rocking chair has been a centrepiece in their home for many years. Mr. Smith was determined to bring this warm, familiar atmosphere to the interior of his Rolls-Royce commission.

As they embarked on the creation, Mr. Smith quickly learned that his non-negotiable design would require allowing the craftspeople time to perfect their art.

The unique Koa tree grows only in Hawaii and is


protected in Hawaiian State and National parks. Koa Wood can only be harvested from private agricultural land and owing to the very specific growing conditions required, to find such a unique log from this extremely limited resource, is truly rare. A Rolls-Royce Wood Specialist described the find as a 'one in a million chance'. Some aspirant brands use more commonly available Koa Wood specimens, but for Rolls-Royce, only the finest example of this extraordinary species would do. Mr. and Mrs. Smith patiently waited for three years for their perfect veneer, as the Rolls-Royce Wood Specialist negotiated with a supplier for a highly prized log from his own, personal collection. This specimen displays a unique depth of character rarely seen, with a figure in the grain that creates the effect of velvet. The craftsmen and women of the Rolls-Royce Bespoke Woodshop embraced the challenge of preserving this rich textural finish in a prized Rolls-Royce Phantom Extended.

The Koa Phantom exterior shines a deep blue by day, but by night, is hidden in the darkness. The Bespoke 'Packard Blue' hue is colour-matched to Mr. Smith's 1934 Packard Twelve Coupe, a rare motor car in his personal collection. Creating an exact match to an 80 year-old finish was no small feat, and even included shipping parts from vintage cars to the Home of Rolls-Royce in Goodwood. After testing on more than 40 test panels, the formula was finally deemed a perfect match. An elegant hand-painted coachline in Dove Grey runs the length of the deep, dark blue Phantom, matching the wheel centre pinstripes. The driver's door bears the personalised initials "JBS Jr" while the passenger door bears the initials of Mrs. Smith, "LAS." On opening the coach doors, a personalised treadplate reads, 'Hand-built in Goodwood, England for Laura & Jack Boyd Smith, Jr.' Across Phantom's fascia lies the Gallery – an uninterrupted piece of glass behind which clients can commission unique works of art and design. For the Koa Phantom, the wood itself takes centre stage, preserved and exhibited at the heart of the car, showcasing its natural beauty.

Koa Wood embellishes the Dove Grey leather interior that is matched to the Packard Twelve and offset by Navy Blue highlights and piping. Above, a Bespoke handcrafted starlight headliner consisting of 1,420 fibre-optic lights on navy-blue leather, depicts the constellation of the night sky above Cleveland, Ohio, on Mr. Smith's date of birth.

The Rolls-Royce monogram on the headrests is matched to the exterior finish while the rear compartment is adorned with a Champagne fridge,

accompanied by a pair of crystal champagne flutes and decanter, engraved with the clients' initials.

A hand-crafted Koa Wood Picnic Hamper completes this unique commission. Koa Wood, saddle leather and stainless steel are meticulously crafted in a process that takes more than 500 hours to complete. The saddle leather trim and interior leather is Dove Grey, matched to the interior of the one-of-a-kind Bespoke Phantom. Stainless steel features on both the exterior and interior of the hamper; with plaques that read, 'Laura & Jack Boyd Smith, Jr.' The hamper includes hand-made wine glasses and decanters from the Ajka Crystal factory in Hungary, famed for its traditional techniques. The stainless-steel cutlery is hand-made in England. The 12-piece set is produced to the highest standards by expert craftspeople using traditional polishing and grinding techniques – a tribute to British steel heritage. Wedgwood porcelain plates add a final flourish to the hamper

# The new Mercedes-Benz C-Class: Sedan

## This is how inspiring the comfort zone can be


Dubai.  Welcome to a new, even more digital and efficient world, and welcome home: the new C-Class stands for both, and in all respects creates a future-proof comfort zone in a time of worldwide transformation. As the first classic model series from Mercedes-Benz, the new C-Class is electrified throughout thanks to plug-in hybrids and mild hybrids with 48-volt technology and integrated starter-generator. Due to a high-efficiency battery system, it achieves an electric range of about 100 kilometres (WLTP ) as a plug-in hybrid. That is unprecedented in this category to date. It also sets standards with respect to sustainability. And because the C-Class is one of the company's highest-volume model series, this systematic electrification has a correspondingly strong effect on our carbon footprint. Other technical refinements include optional features such as DIGITAL LIGHT and rear-axle steering. The first units of the new C-Class Sedan are expected to arrive in the region by the second half of the year.

The new C-Class already looks to be in motion at a standstill with its dynamic proportions, thanks to the combination of short front overhang, long wheelbase and rear overhang. The sporty bonnet with power domes accentuates this urge of forward motion. The windscreen and passenger cell have been moved to the rear for these classic proportions known in the industry as "cab-backward design". The preceding model was already a great step forward in terms of a high-value appeal in the interior, and the new C-Class goes even further with respect to modern luxury. The interior adopts highlights from the new S-Class, adding a sporty touch. Other features producing the sporty, superior appearance include the wide track and the flush 17- to 19-inch wheels in modern designs.

The brand's hallmark radiator grille characterises the front. All models feature a central star, with the design and character of the radiator grille differing in the details. The base model has a central star and louvres. In the AVANTGARDE line, there are additional decorative elements in the louvres, while the radiator grille and front apron feature chrome surrounds. The distinguishing feature of the AMG Line is the diamond grille with the star design in chrome.

The rear-end design is typical of a Mercedes-Benz sedan. The high-quality design of the tail lamps fascinates with an unmistakable day and night appearance. In the Sedan, the lamps for the first time have a two-piece design in the C-Class, with the light functions divided between the side wall and boot lid lamps. Their precisely configured interiors also showcase the standard of particularly high quality in detail. Optional or line-specific trim in the rear bumper attractively rounds off the rear view. Three new paint finishes – spectral blue, high-tech silver and opalite white – have been added to the colour range.

Interior design: sporty touches thanks to the driver-centred design

The dashboard is divided into an upper and a lower section: into a wing-like section with new, flattened round vents reminiscent of aircraft engine nacelles, and into an opulent expanse of trim. The latter flows from the centre console to the dashboard without interruption. Driver-focus adds to the sportiness: the dashboard and central display are slightly tilted towards the driver by six degrees.

The driver area features a high-resolution LCD screen. It is free-standing and appears to float in front of the wing profile and the expanse of trim. This sets the driver display apart from traditional cockpits with classic round dials. Customers have a choice between a 10.25-inch (26.0 cm) or a 12.3-inch (31.2 cm) version.

The paradigm change to digitisation is also obvious in the central display: the vehicle functions can be controlled using the high-quality touchscreen. Its portrait orientation is particularly advantageous for navigation. The touchscreen likewise appears to float above the expanse of trim. Like the dashboard, the screen is slightly tilted towards the driver. The central display has a screen diagonal of 9.5 inches (24.1 cm) as standard. A larger version measuring 11.9 inches or 30.2 cm is optionally available.

The special design of the optional AVANTGARDE or sport seats of the new C-Class uses layers and

enveloping surfaces to create a visual impression of lightness. A dashboard covered with man-made leather and featuring nappa-look beltlines is available for the C-Class (optional equipment, standard with AMG Line). The range of available trim showcases innovative surfaces. These include new interpretations of open-pored veneers in brown tones and a black, open-pored wood veneer featuring fine inlays of genuine aluminium that follow the dashboard's contours. Latest generation of MBUX: intuitively operated and learning
Like the new S-Class, the new C-Class is equipped with the second generation of MBUX (Mercedes-Benz User Experience). The vehicle interior becomes even more digital and intelligent, as both the hardware and software have made great strides: Brilliant images on the LCD screens make it easy to control vehicle and comfort functions.
The driver display and media display offer a holistic, aesthetic experience. The information is presented in a clearly structured way. Mercedes-Benz developed a new display aesthetic for the S-Class, which now is systematically used as the basis for other models.
The look of the screens can be individualised with three display styles (Discreet, Sporty, Classic) and three modes (Navigation, Assistance, Service).

- In "Classic" style, the driver is welcomed with a familiar display environment. The proven display with two tubes and changing content between them provides all the information relevant to the driver.
- "Sporty" is dominated by the colour red, with dynamic design of the central rev counter.
- In "Discreet" style, the content is reduced to what is essential. In addition, both screens can be shown in seven colour schemes with the ambient lighting. This makes for an impressive colour experience in the interior.
- In "Assistance Mode", the traffic situation is shown in real time supplemented with important display information.

The full-screen navigation was adopted from the S-Class, and gives the driver the best possible guidance on a journey.
Powertrain: systematic electrification of the modern four-cylinder engines
Thanks to systematic electrification and intelligent downsizing, the new C-Class sets new standards in efficiency. The engine range has only four-cylinder units from the current modular FAME (Family of Modular Engines) Mercedes-Benz engine family. Accordingly, the engine range plays a major role in the flexibility of the international production network, with needs-based electrification.
In addition to turbocharging, the petrol engines now have an integrated starter-generator (ISG) for intelligent assistance at low engine speeds as a mild hybrid of the second generation. This ensures outstanding power delivery. The ISG uses a 48 volt on-board electrical system that ensures functions such as gliding, boosting or energy recovery, and makes significant fuel savings possible. The engines also start very rapidly and comfortably as a result, so that the start/stop function is almost as imperceptible to the driver as the transition from gliding with the engine switched off to strong acceleration under engine power. When idling, the intelligent interaction between the ISG and the combustion engine ensures outstandingly smooth running. Transmission: Automatic now standard across the board The 9G-TRONIC transmission was developed further for adapting the ISG, and is installed in all C-Class models. The electric motor, power electronics and transmission cooler have now moved into or to the transmission. Previously required lines are eliminated, which offers advantages with regard to installation space and weight. In addition, the efficiency of the transmission has been increased. Amongst other things, the optimised interplay with the electric auxiliary oil pump reduces the delivery rate of the mechanical pump by 30 percent compared with the predecessor – good for efficiency. Furthermore, it uses a new generation of the fully integrated transmission control with multi-core processor and new design and connectivity technology. In addition to the increased computing power, the number of electric interfaces has been drastically reduced, and the weight of the transmission control has been cut by 30 percent compared with the predecessor. Fourth-generation plug-in hybrids will follow soon after the launch. Electrification is taking a great step forward while using the same base engines. With an electric output of 95 kW/(129 hp) and an all-electric range of around 100 kilometres (WLTP), the plug-in hybrid C-Class will operate in all-electric mode in many cases - and on many days without using the combustion engine at all. This is the two-litre variant of the ultra-modern M 254 four-cylinder engine. The complete package is not only very efficient, but also decidedly sporty.
The high-voltage (HV) battery has been developed in-house by Mercedes-Benz AG. It is part of a fourth-generation family of batteries and represents a logical evolution of the previous generation. It consists of 96 cells in a so-called pouch configuration. The battery has a total capacity of 25.4 kWh, thereby bringing about a significant increase in electrical range to around 100 kilometres. To account for the high energy density, the HV battery has an internal cooling system. The thermal management system can therefore control the operating temperature irrespective of the climate control in the vehicle interior. In addition to continuous operation in hot and cold regions, this also allows quick charging with direct current. Even when the battery is completely discharged, it can be fully charged in around 30 minutes using the optional 55 kW DC charger. A standard-fit 11 kW charger (depending on the market) is available for three-phase charging at a Wallbox connected to the domestic AC mains.

The driving experience: considerably more electric
All in all, the driving experience is significantly more electric. In view of the increase in electric range to around 100 kilometres, drivers will be able to cover most everyday journeys under electric power alone. The energy recovery function allows kinetic energy to be recuperated during deceleration or downhill driving, a process that has now also been improved in interaction with the hydraulic brake. The energy recovery output is now over 100 kW. The intelligent, route-based operating strategy activates the electric driving mode where this is most appropriate for the route. It takes into account such factors as navigation data, topography, speed limits and the traffic conditions for the entire planned route. A driver wishing to influence the energy recovery rate can do so directly in three stages controlled by rocker switches behind the steering wheel. This is possible in all driving modes except SPORT. In the driving mode D-, for example, the driver can experience the "one-pedal feeling": When the driver takes his foot off the accelerator the vehicle slows down purely by electric means, to such an extent that the hydraulic foot brake is often not needed.
The operating strategy communicates with the sensors of the assistance systems and thus efficiently supports the driver in many driving situations. Over longer distances in urban areas, for instance, the car will prioritise electric driving. Two additional driving modes enable the driver to make particularly advantageous use of the plug-in powertrain:
**BATTERY HOLD:** Maintaining the charge state of the high-voltage battery is given priority, e.g. when intending to drive in a city centre or green zone later; selection of the most suitable drive configuration by the hybrid powertrain system, depending on the driving situation and route.
**ELECTRIC:** Electric driving up to 140 km/h, adjustable energy recovery tare in overrun mode, adaptation of Active Distance Assist DISTRONIC for electric driving, activation of the combustion engine using a pressure point of the accelerator pedal (kickdown) Suspension: comfort and agility
The key components of the new, dynamically configured suspension are a new four-link axle at the front and a multi-link axle at the rear mounted to a subframe. The new suspension provides the basis for a high level of suspension, ride and noise comfort, agile handling and driving fun. The new C-Class is optionally also available with continuously adjustable damping and a sport suspension. Air suspension at the rear is standard for the Sedan model of the plug-in hybrid.
Rear-axle steering: more agile and dynamic
The new C-Class is especially agile and stable with the optional rear-axle steering and the accompanying, more direct steering ratio at the front axle. The steering angle at the rear axle is 2.5 degrees. This reduces the turning circle by 43 centimetres to 10.64 metres.
The driver also needs fewer turns of the steering wheel for full lock. With rear-axle steering, and depending on the drive concept, this requires 2.1 instead of 2.35 turns (rear-wheel drive with comfort steering).
At speeds below 60 km/h, the rear wheels steer in the opposite direction to the front wheels – and by up to 2.5° opposite to the front-axle angle during parking. Depending on the situation, this virtually shortens the wheelbase, and the vehicle is more manoeuvrable, light-footed and agile as a result. At speeds above 60 km/h, the rear wheels steer up to 2.5° in the same direction as the front wheels. This virtual increase in wheelbase has noticeable advantages in the form of improved handling stability and safety at high speeds, during fast lane-changes or sudden evasive manoeuvres.
Crash safety: fit for all global requirements
Together with the familiar PRE-SAFE® protection concepts for frontal and rear collisions, PRE-SAFE® Impulse Side (available in conjunction with the Driving Assistance Package Plus) forms a kind of virtual crumple zone that extends all around the vehicle. As only a limited crumple zone is available in a side impact, PRE-SAFE® Impulse Side (availability depending on selected equipment) can move the affected driver or front passenger away from the danger even before the crash as soon as the system detects that a side collision is immediately imminent. For this purpose, air chambers in the side bolsters of the front seat backrest are inflated in fractions of a second.
All in all, the safety concept of the C-Class is based on an intelligently designed body shell with a particularly rigid passenger cell and crash structures that deform in a specific way acting together with seat belts and airbag systems. In an accident, systems such as belt tensioners and airbags can be activated to protect the occupants as the situation demands. With the help of numerous numerical simulations, the vehicle structure was configured to ensure particularly good occupant protection in the event of a crash. In all aspects of the vehicle configuration that are relevant in an accident, the legal requirements were further bolstered by internal testing requirements and test criteria derived from the findings from real-life accident scenarios.

# Inspired Design:

## PEUGEOT Presents New 3008 SUV


PEUGEOT has unveiled the brand-new 3008 SUV in the GCC. Being at the heart of the French brand's stylish SUV line-up, the new PEUGEOT 3008 is a contemporary SUV with a design that captivates the driver both inside and out.

With the revamped PEUGEOT 3008, the French automaker's line-up has been strengthened even further by introducing a new design, delivering masterful power and efficiency. It is a multipurpose car that continues to demonstrate the harmony between technology, style and driving pleasure.

Rakesh Nair, Managing Director for European Brands at Stellantis ME, said: "Our revamped line-up in the region has been successful in recent years and with the addition of the new 3008, we are set to continue to deliver a car that is the perfect median between the 2008 and the 5008 for our customers. With the 3008, we have a model that further enriches and highlights our


ambition for the region. We are happy to further bolster our line-up by incorporating ultra-modern styling, maximum comfort, and our signature cutting-edge technology for our customers in the GCC."

**RELIABLE & TESTED ENGINE**

With its powerful and unique style, the new 3008 follows PEUGEOT's design language, and is offered with a 1.6 litre turbo engine coupled to a 6-speed automatic transmission producing 165 hp and 240 Nm of torque for those who like a dynamic driving experience.

The engine has undergone stringent and successful hot weather testing prior to its release in the region. Not only is it strong and reliable, but also promise fuel economy averaging 15.1 kilometres/litre.

**CUTTING-EDGE TECHNOLOGY: PEUGEOT I-COCKPIT®**

Putting the latest technology at the driver's finger tips, PEUGEOT's innovative iCockpit® system, includes a compact steering wheel for better handling and grip, an 8-inch and 10-inch HD touch screens, as well as a digital head-up display.

The central touch-screen is perfectly positioned and accompanied by seven 'piano key' toggle switches which operate the main i-Cockpit® features: radio, air conditioning, navigation, vehicle settings, telephone and phone mirroring.

# K8, a Modern Innovative Sedan,

## Herald the Newly Transformed Kia Brand Kia Brand ia Brand

Kia Corporation has today revealed the first official images of the K8, the first model for the rebirth of Kia brand to exemplify its new purpose and ambitions for the future.

The K8 represents a new model name for Kia and is the first model to show the brand's new design identity as well as the contemporary new Kia logo.

With a focus on modern, premium quality and dynamic performance, the K8 moves forward in the sports sedan space and will build on the success of the K7(known as Cadenza in some markets) and continues Kia's rise towards excellence in the segment later this year.

The K8 features a modern innovative sedan that combines sportiness and performance with a progressive and sleek exterior design.

"Following our recent company rebrand, we keep moving toward our new brand values with a new model – the K8. This modern sedan has been designed with innovation and elegance at its very core," said Karim Habib, Senior Vice President and Head of Kia Global Design Center. "While paying homage to the K7, the K8 looks to the future. Its progressive exterior takes on character and emotion, and combines those qualities with an expressive looking front and a dynamic swooping rear, giving the K8 a high-quality, premium presence that takes direct inspiration from some of the world's most technically advanced yachts."

Exterior design: embodying an exciting new future

Taking on an all-new name and the first model to be launched following Kia's recent rebrand, the K8 has been designed with the future in mind.

At the front sits a new signature frameless 'tiger nose' grille that gives the K8 presence and authority. The frameless grille, which is integrated within the front bumper to give a clean yet expansive look, features an intricate diamond lattice designed to express the movement of light. The front lamps include a turn signal that resembles a star could.

Symbolically pointing the way forward – and sitting proudly at the very front of the K8, just above the re-imagined 'tiger nose' grille – is Kia's contemporary new logo that expresses 'symmetry', 'rhythm' and 'rising' elements, embodying Kia's confidence and renewed commitment to customers.

The elongated K8 (5,015mm) features a sporty side profile with a dynamic character line that runs the length of the sedan and takes inspiration from yachts sailing across calm waters. A chrome finish runs along the DLO (Daylight Opening) line and the bottom of the doors, and finishes its journey at the rear lamp - adding confidence and gracefulness to the side of the sports sedan.

Completing the progressive yet elegant front and side profile is a dynamic and muscular rear-end that re-interprets the sedan of today as a modern 'fastback' passenger car. Strong, dropping shoulders add to the drama of the K8 at the rear, while a clean tailored spoiler beautifully finishes the sporty, low roofline.

Running below the spoiler lip is a futuristic-looking horizontal taillight that carries across the jewel patterned arrangements from the front and side and connects the K8's next-generation LED rear light clusters.

The 3D vertical clusters hug the corners of the K8, emphasizing clean, angular lines at the rear and further adding depth and width to the rear of the car.

The Kia's new logo and first-ever K8 badge sit at the rear just below the horizontal light dash.

**ALL-NEW CAR, ALL-NEW NAME**

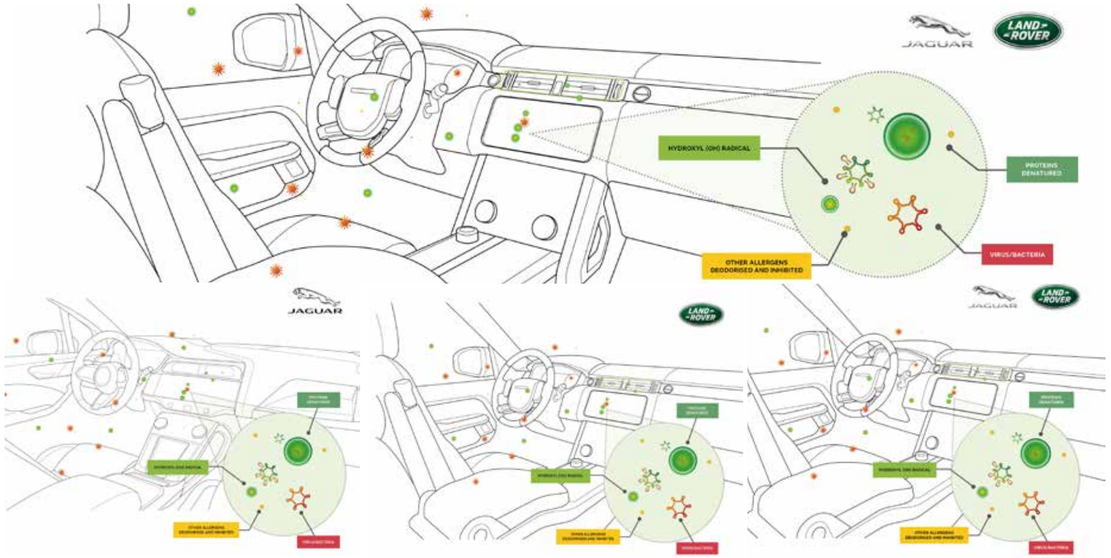
The introduction of an all-new model name – the K8 – is part of Kia's brand transition and represents the premium space in which the new sports sedan will occupy.

The K8 will offer a comfortable yet high-performance driving experience that will complement the simple, ergonomic 'first class' interior. The new model signals an upward journey in design, technology and modernity from the outgoing K7, delivering a class-leading package that redefines the meaning of sports sedan.

Due for market launch later this year, more information on the K8 will be made available to in due course.

# JAGUAR LAND ROVER'S FUTURE AIR

## PURIFICATION TECHNOLOGY PROVEN




**TO INHIBIT VIRUSES AND BACTERIA BY UP TO 97 PER CENT**

Jaguar Land Rover's future cabin air purification technology has been shown in laboratory tests to inhibit viruses and airborne bacteria by as much as 97 per cent. The prototype heating, ventilation, and air conditioning (HVAC) system uses Panasonic's nanoe™ X** technology to inhibit harmful bacteria and viruses, and will help the cabins of future Jaguar and Land Rover models to deliver a unique customer experience. The research comes as Jaguar Land Rover defines its future strategy: a sustainability-rich reimagination of modern luxury, unique customer experiences, and positive societal impact.

Jaguar Land Rover partnered with Perfectus Biomed Ltd, a leading microbiology and virology lab, to perform the world-leading laboratory-based sealed-chamber test designed to simulate a vehicle ventilation system in recirculation mode over a 30-minute cycle. The independent research showed that viruses and bacteria were inhibited by as much as 97 per cent.

Panasonic's innovative nanoe™ X technology has also been tested on novel coronavirus (SARS-CoV-2*) by Texcell, a global research organisation that specialises in viral testing and immunoprofiling, and is one of the laboratories in the world with permission to test against novel coronavirus. It found more than 99.995 per cent of the virus was inhibited during the two-hour laboratory test***.

Dr Steve Iley, Jaguar Land Rover's Chief Medical Officer, said: "Our customers' wellbeing is of paramount importance to us – and now, more than ever, we are all looking for technological solutions that can help take care of our loved ones. The independent research, developed and commissioned by our expert engineers, is just one of the ways we are working to assure our customers that harmful pathogens are being minimised, providing a cleaner environment for passengers inside the cabin and setting new standards in the ownership experience."

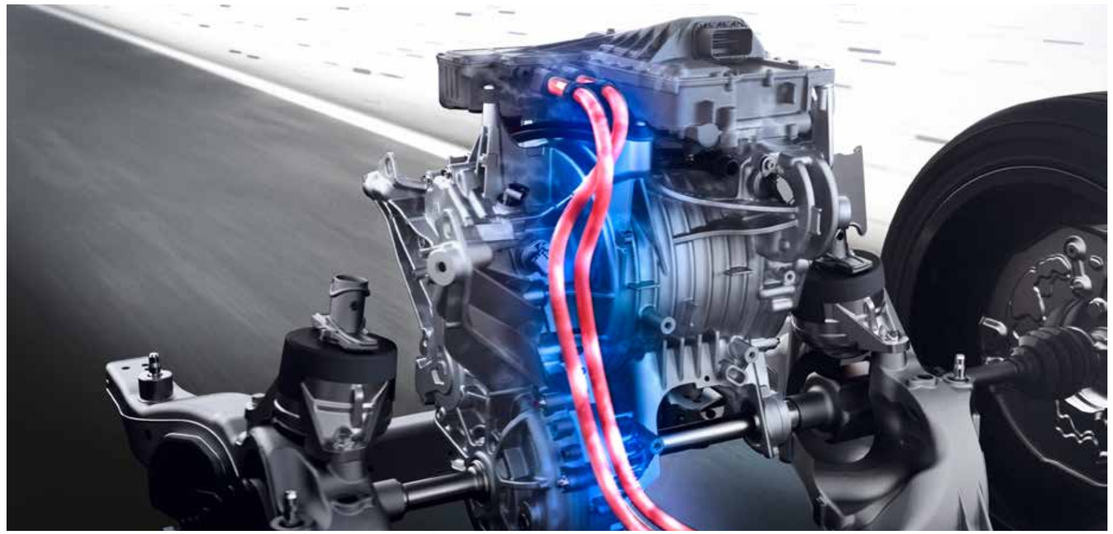
To provide active air purification the nanoe™ X technology - ten times more effective than its predecessor nanoe™ - uses a high voltage to create trillions of Hydroxyl (OH) Radicals enveloped in nano-sized water molecules****. These OH Radicals denature the virus and bacteria proteins, helping inhibit their growth. The OH Radicals deodorise and inhibit allergens in a similar way to create a cleaner air environment for customers.

Alexander Owen, Research Engineer at Jaguar Land Rover, said: "This technology is a great example of being able to harness the power of nature and puts Jaguar Land Rover right at the forefront of this cabin technology. Hydroxyl Radicals are one of the most important natural oxidants in chemistry and have been helping to clean our atmosphere for millennia, removing pollutants and other harmful substances. The creation of this technology and our advanced research, is the first step in deploying this scientific phenomenon within vehicle cabins of the future."

This pioneering research will allow Jaguar Land Rover to offer the next generation of advanced cabin air filtration in the future. Models^ across the Jaguar range, including the new all-electric Jaguar I-PACE performance SUV, and Land Rover line-up – including the Discovery and Range Rover Evoque – currently offer nanoe™ technology and PM2.5 filtration. An innovative pre-conditioning feature is also available so customers can enable the system before getting into the vehicle.

# Mercedes-Benz Drive Systems Campus

## Stuttgart-Untertürkheim gears up for “Electric First” future



Stuttgart. Mercedes-Benz is transforming its Mercedes-Benz Drive Systems unit and its Stuttgart-Untertürkheim site for an “Electric First” future in the context of Ambition 2039 – the company’s path toward carbon neutrality. Mercedes-Benz is thus underpinning its new strategy, which was presented in October 2020. After intensive negotiations, the management and works council of the Mercedes-Benz Untertürkheim plant in Germany reached an agreement to invest a three-digit million euro amount to transform Untertürkheim, the largest site in the company’s global powertrain production network which will in future be known as the “Mercedes-Benz Drive Systems Campus”. The site will focus on research, development and production ramp-ups of drive systems. The agreement strengthens Untertürkheim’s role as a development and qualification hub for drive technologies and further expands its already broad expertise in the field of e-mobility - through a campus for electric and electrified drive systems. A new factory for the small-series production of future battery cells, and a dedicated battery safety lab, will complement Mercedes-Benz’s existing research and development activities in the field of battery technology. The company strives for a holistic approach which ranges from basic research and development to manufacturing of battery systems. In terms of series production, the site will focus increasingly on electric drive components - battery and electric drive systems, while conventional engine, transmission and component production will gradually be phased out, which will effect employment profiles and scopes.

Markus Schäfer, Member of the Board of Management of Daimler AG and Mercedes-Benz AG; responsible for Daimler Group Research and Mercedes-Benz Cars COO: “Mercedes-Benz stringently moves forward on the path to CO2-neutrality. Taking a leading role in electric vehicles means further boosting our own research and development and achieving maximum progress with global tech partners. I am totally convinced that in development and production, optimal access to new technologies and global expertise as well as redirecting the use of capital to carbon neutral investments will be more crucial than ever in the future. This requires maximum flexibility and the consistent scrutiny of existing structures. The transformational phase toward CO2-neutrality also means far-reaching changes in particular to our drive system division. Targeting our Untertürkheim site on ‘Electric First’ with a dedicated campus for electric drive technologies means an important cornerstone for our Mercedes-EQ product initiative. A clear focus of our activities lies on research and process engineering of battery and cell technology, taking into account the entire value chain.”

The Mercedes-Benz Drive Systems Campus is a crucial development step regarding the sustainable transformation of the Untertürkheim site. At the same time, this requires substantial adjustments in its production program and processes. In this context, the existing competence centres will be restructured or systematically expanded. The close link of research, development and production at the same location will create important preconditions for synergies and unique know-how strengthening the vertical integration in house as a key pillar.

Jörg Burzer, Member of the Board of Management of Mercedes-Benz AG, Production and Supply Chain: “The Untertürkheim site has always been an integral part of the Mercedes-Benz powertrain production network – as an innovation centre and as a hub of Mercedes-Benz powertrain expertise. Mercedes-Benz takes its responsibility for this long-established location very seriously - towards employees, politics, science and partners. Bearing responsibility also means adapting and modernizing the structure to ensure competitiveness and future viability. By implementing the new vision at the Untertürkheim site, we want to set the course for a sustainable transformation of Mercedes-Benz with a clear focus on electrification. With the Mercedes-Benz Drive Systems Campus we make sure that the drive systems of tomorrow can be designed to a very significant extent at the site. Moreover, producing high-tech battery systems and electric drive systems, drive components ‘made in Untertürkheim’ will continue to define Mercedes-Benz vehicles in the future.”

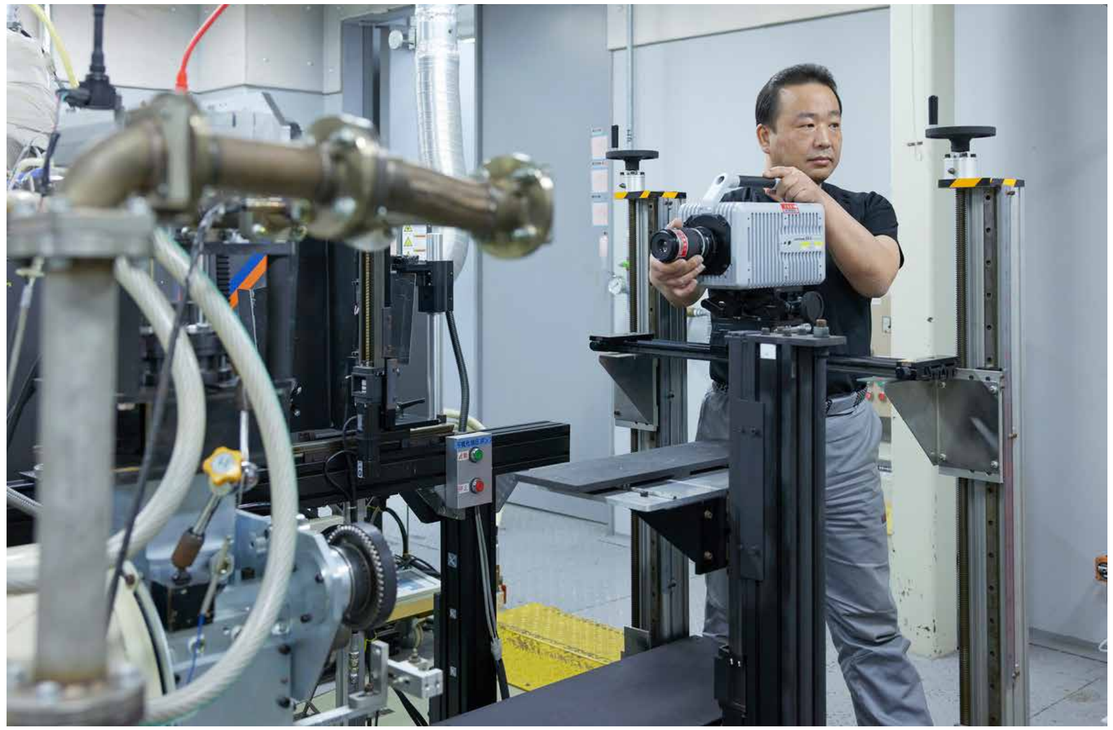
Focus on battery technology and electric drive systems

With the bundling and extension of its battery activities the company further strengthens its expertise in the field of e-mobility. Widespread research and development activities are already anchored at the location, such as the e-technology centre and cell technology centre, where, among other things, prototypes for the electric drive system are built and cell technologies are researched and tested. Additionally, the battery research and development activities currently located at the Nabern part of the plant, including various test benches, are to be located on the campus in the future. Further investments are planned in the significant expansion of the current cell technology centre in order to be able to cover the entire value chain of battery technology. In addition to basic research, pre-development and design of battery cells, a new factory for the small-series production of lithium-ion battery cells is being planned, starting operations in 2023. The sustainability factor, transparent cell development through to recyclability, plays a major role in this. Moreover a dedicated battery safety lab will complement Mercedes-Benz’s activities. In future, the company will cover almost the entire field of battery technology at its Untertürkheim location - right down to battery systems which are manufactured at the site. The battery factory in Brühl nearby will produce batteries for plug-in hybrid vehicles from 2022. Starting this year, battery systems for the Mercedes-EQ model EQS - the all-electric member of the S-Class family - will roll off the assembly line at the Hedelfingen part of the plant. The EQS will be manufactured at Factory 56 in Sindelfingen some 20 km away starting in the first half of 2021. The battery system for the EQE will also be produced in Hedelfingen.

The company moreover is setting a clear focus on the development of the highly efficient electric drive system, the intelligent combination of electric motor, battery system, power electronics and software through to series maturity including testing. The next generation of electric motors are being developed in house and will feature inverter and high voltage technology. The manufacturing and assembly of electric drive systems parts for future vehicle models of the Mercedes-EQ brand will start at the end of 2024 and round off the product portfolio with the battery factories in Hedelfingen and Brühl. The previously planned production volumes of electric drive systems will double. With regard to the series production volumes of conventional powertrains at the Untertürkheim location, Mercedes-Benz will even more benefit from the flexibility of its global powertrain production network in future. New production volumes are being examined in detail in order to maximize efficiency and profitability. On the employment side, this leads in the medium term to changes in employment profiles, for which the company prepares its employees with targeted qualification measures. The reduction of series production volumes of conventional powertrains will also lead to adjustments of personnel at the Untertürkheim location. The company is preparing for this with various measures and the top priority is to implement structural and personnel measures in a socially acceptable manner with regard to the jobs affected.

# Nissan's 100% electric motor-driven e-POWER technology

## reaches global milestone



On-board engine development achieves 50% thermal efficiency

Nissan today announced a breakthrough in engine efficiency, reaching 50% thermal efficiency with its in-development, next generati–on e-POWER system. Nissan's e-POWER system utilizes an on-board gasoline engine to provide electrical energy to the e-powertrain battery pack. Nissan's latest approach to engine development has raised the bar to world-leading levels, accelerating past the current auto industry average range of 40% thermal efficiency, making it possible to even further reduce vehicle CO2 emissions.

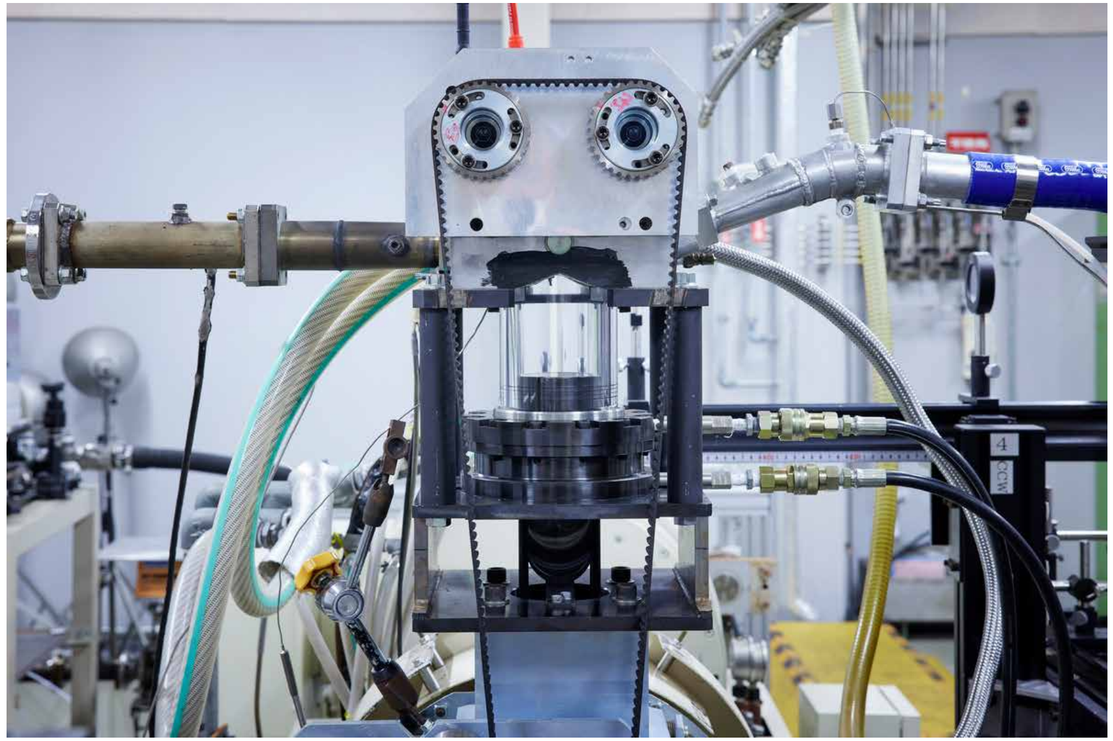
"In pursuit of carbon neutrality across our product lifecycle by 2050, Nissan aims to electrify all new models launched in major markets by the early 2030s," said Toshihiro Hirai, senior vice president of the powertrain and EV engineering division. "Nissan's electrification strategy promotes the development of e-powertrains and high-performance batteries for EVs, with e-POWER representing another important strategic pillar."

A dedicated approach towards enhanced efficiency

Conventional internal combustion engine (ICE) vehicles demand power and performance from an engine under a wide range of speeds (RPMs) and loads. This fundamental requirement means conventional engines cannot perform at their optimal efficiency at all times.

However, Nissan's e-POWER system utilizes an on-board engine as a dedicated electricity generator for the system's e-powertrain. Operation of the engine is limited to its most efficient range, appropriately managing the engine's electricity generation and the amount of electricity stored in the battery.

With this dedicated approach, and the evolution of battery technology and energy management techniques, Nissan has been able to improve thermal efficiency beyond current levels. Development of the next generation e-POWER system continues this path of efficiency through Nissan's design and development of an engine exclusively for e-POWER.



The STARC concept

To achieve 50% thermal efficiency, Nissan developed a concept called "STARC", named after the key words strong, tumble and appropriately stretched robust ignition channel. The concept enables improvement of thermal efficiency by strengthening in-cylinder gas flow (the flow of the air-fuel mixture that is pulled into the cylinder) and ignition, reliably burning a more diluted air-fuel mixture at a high compression ratio.

In a conventional engine, there are restrictions on controlling the air-fuel mixture's dilution level to respond to changing driving loads, with several trade-offs between various operating conditions, such as in-cylinder gas flow, ignition method, and compression ratio which can sacrifice efficiency for power output.

However, a dedicated engine running at an optimal range of speed and load for electrical generation makes it possible to dramatically improve thermal efficiency.

In internal testing, Nissan achieved a thermal efficiency of 43% when using the EGR1 dilution method and of 46% when using lean combustion2 with a multi-cylinder engine. A level of 50% was achieved by operating the engine at a fixed RPM and load combined with waste heat recovery technologies.

The Nissan e-POWER System

e-POWER was first introduced in Japan in 2016 with the Nissan Note. At its core is the same 100% electric motor-driven technology used in the Nissan LEAF to deliver instant torque, power, efficiency and excitement. The system is comprised of a gasoline engine with a power generator, inverter, battery and electric motor.

Unlike a conventional hybrid system, e-POWER enables exclusive use of the on-board engine for electrical generation by separating the engine's output and the driving force at the wheels.

In late December 2020, Nissan launched the all-new Note in the Japan market. The all-new Note comes exclusively with e-POWER and has already gained over 20,000 orders. As the company's best-selling model in its home market, the Note plays a key role in the Nissan NEXT global business transformation plan.

1 Technology that recirculates a portion of exhaust gases after combustion back into the combustion chamber.

2 Combustion with an air-fuel mixture ratio that has more air than the theoretical air-fuel ratio (wherein the fuel and oxygen reaction have perfect proportions; that is, the ratio of completely burned air to fuel). Lean combustion with an excess air ratio of λ = 2 is assumed.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