

# JAGUAR LAND ROVER EXPANDS ELECTRIFIED LINE-UP WITH THREE-CYLINDER PLUG-IN HYBRID

- New three-cylinder plug-in hybrid system delivers quiet, zero-tailpipe emission journeys
- Optimises fuel economy (up to 201.8 mpg) and reduces vehicle taxes (UK)
- Electric-only range of up to 41 miles with fast, easy charging
- CO2 emissions as low as 32g/km\* (WLTP)
- Additional efficiency without compromising all-terrain capabilities
- Debuts on the company's two best-selling vehicles, the Range Rover Evoque and Land Rover Discovery Sport
- Designed, engineered and built in-house using the company's flexible, scaleable Ingenium engine architecture
- Next step in Destination Zero mission: zero emissions, zero accidents and zero congestion

**Wednesday 22 April 2020, Whitley, UK –** Jaguar Land Rover is expanding its electrified vehicle line-up with the introduction of its latest plug-in hybrid system, which debuts in the company's two best-selling vehicles. It's the next step in delivering Jaguar Land Rover's Destination Zero mission to shape future mobility: zero accidents, zero emissions and zero congestion.

The 1.5-litre three-cylinder plug-in hybrid seamlessly combines a conventional petrol engine, the smallest in the Ingenium range, with an electric motor to provide sustainable, efficient allelectric performance for shorter trips plus traditional power or combined petrol and electric drive for optimum efficiency on longer journeys. The new technology is being introduced in the latest generation Range Rover Evoque and comprehensively updated Land Rover Discovery Sport, making them among the most cost-efficient compact premium SUVs available.

Nick Rogers, Jaguar Land Rover Executive Director of Product Engineering, said:

"Designed, engineered and manufactured in-house, the modular, scaleable and flexible architecture of our Ingenium family has allowed us to create a pioneering, threecylinder plug-in hybrid system, giving our customers more choice than ever before. The 200PS engine, combined with an 80kW electric motor on the rear axle, gives fantastic all-wheel drive capability and the perfect blend of performance, depending on your driving style. Efficient electrification, downsizing and lightweighting also enables incredibly low CO2 of just 32g/km on the Evoque and 36g/km on the Discovery Sport. Additionally, both vehicles have an impressive all-electric, zero tailpipe emission range of 66km and 62km, respectively. Thanks to the dedication and hard work of our Jaguar Land Rover family, our latest plug-in hybrid offers the same awesome capability and composure with all-electric driving and stunning efficiency, both on- and off-road."

Jaguar Land Rover's latest plug-in hybrid system offers customers a cost-effective choice of modes to best suit their needs. Electric-only mode delivers quiet, zero-tailpipe emissions driving on shorter journeys, with a range of up to 41 miles (66km), depending on model. Hybrid mode automatically combines petrol and electric driving for optimum efficiency on longer journeys. In this mode the car adapts to the driving conditions and judges the remaining charge in the battery to maintain the charge or fuel economy. As a third option for longer distances, the vehicle can be powered solely by the 1.5I Ingenium petrol engine, maintaining the battery charge.

<sup>\*</sup>Depending on model



Battery charging is made as easy as possible, whether the vehicle is on the move or plugged in. While being driven, energy generated by the engine during acceleration, or by braking in electric or hybrid mode, is harvested and used to charge the battery. When plug-in charging is required, the 15kWh battery can be powered up from zero to 80 per cent in as little as 30 minutes using a public rapid charger. It takes between 1 hour and 24 minutes and 6 hours 42 minutes at home, depending on whether the car is plugged into a dedicated 7kW wall box or typical domestic electricity supply.

Jaguar Land Rover has filed over 40 patent applications for the latest class-leading technologies that debut in the three-cylinder plug-in hybrid system. A number of these relate to the high voltage belt-integrated starter generator (BiSG), for example, which is a key enabler for the hybrid system on this car.

The company's new 200PS 1.5-litre three-cylinder Ingenium petrol engine is at the heart of its latest plug-in hybrid system. Designed, engineered and manufactured in-house, the lightweight aluminium engine is 37kg lighter than even the four-cylinder version. It delivers strong performance and customary Jaguar Land Rover refinement with impressive fuel economy of up to 201.8 miles per gallon (1.4 litres / 100km), depending on model, thanks to its hybrid electric technology.  $CO_2$  emissions are as low as 32g/km on the WLTP combined test cycle.

Both the Range Rover Evoque and the Land Rover Discovery Sport are built on Land Rover's Premium Transverse Architecture, which was designed from the outset for both plug-in and mild-hybrid technologies. The hardware has been packaged beneath the cabin floor without compromising cabin and luggage space, or all-terrain capabilities.

# **Cost of ownership**

Strong residual values and less frequent trips to the petrol pumps mean the whole-life cost of the Plug-in Hybrid Electric Vehicle will be highly competitive.

As businesses around the world aim to drive down their fleet average emissions, reducing their carbon footprint and running costs, the compact premium SUV PHEVs will appeal to both companies and employees.

Company car drivers in the UK will also experience significant savings. With CO2emissions of 32g/km and a zero-emissions range of up to 66km(41 miles),Range Rover Evoque PHEVs registered after 6 April 2020 qualify for a new, lower Benefit-in-Kind (BIK)rate of just six per cent in 2020/21, rising to eight per cent in 2022/23a. With CO2emissions of 36g/km, and a zero-emissions range of 38 miles, Discovery Sport PHEVs registered after 6 April 2020 qualify for a 10per cent BIK rate in 2020/21, rising to 12 per cent in 2022/23a.

# **Electrification of Halewood plant**

The introduction of this latest technology to the Range Rover Evoque and Land Rover Discovery Sport marks the second phase in the electrification of the company's Halewood plant in the UK. More than 1,500 employees have been retrained to build the latest electrified variants of the ever-popular compact SUVs. This follows the earlier enhancements at the plant for the launch of the new Evoque and significantly updated Discovery Sport, including mild hybrid-electric assembly facilities and a new stamping line. Both vehicles are already available with a line-up of efficient four-cylinder diesel and petrol engines, including a 48-volt mild-hybrid system.

### Jaguar Land Rover's journey to Destination Zero



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Jaguar Land Rover has a growing portfolio of electrified products across its model range, embracing fully electric, plug-in hybrid and mild-hybrid vehicles.

In addition to the Discovery Sport and Range Rover Evoque, mild-hybrid and plug-in hybrid options are also offered on the flagship Range Rover and Range Rover Sport vehicles. Similarly, the recently revealed New Defender features mild-hybrid from launch and plug-in hybrid will be introduced later this year.

Jaguar Land Rover was the first company to launch a premium all-electric performance SUV, the multiple award-winning Jaguar I-PACE, and has confirmed plans to transform its Castle Bromwich facility to manufacture a range of new electrified vehicles, starting with the new luxury Jaguar XJ.

Last year, the company also announced that it will build electric drive units at its Wolverhampton (UK) Engine Manufacturing Centre, offering full flexibility between new petrol and diesel engines and electric units as drivers transition from conventional to electrified vehicles. This is complemented by investment in the UK's most innovative and technically-advanced battery assembly centre at nearby Hams Hall. Together, these facilities will power the next generation of Jaguar and Land Rover models.

In parallel, Jaguar Land Rover continues to refine and improve the latest diesel and petrol engines, which are an integral part of the journey to electrification and are required alongside electric technology, both for consumer choice and as part of hybrid systems.

By growing its portfolio of electrified products, the company is driving towards Destination Zero; its ambition to make societies safer and healthier, and the environment cleaner – a responsible future for its workers, customers and communities. Through relentless innovation, Jaguar Land Rover is adapting product and services to meet the needs of a rapidly changing world.

# ENDS

Further information.

Jaguar Land Rover social channel:

Twitter: <u>https://twitter.com/jlr\_news?lang=en</u>@JLR\_News

For more information visit www.media.jaguarlandrover.com or contact:

Jessica Bowden-Eyre, Corporate Affairs Manager

E: jbowdene@jaguarlandrover.com

T: +44 (0) 7734 855 245





### Notes to editors.

For more information about Destination Zero please visit <u>www.jaguarlandrover.com</u>.

#### About Ingenium engines

Ingenium, the family of premium diesel and petrol engines designed, engineered and manufactured by Jaguar Land Rover, delivers class-leading levels of torque, horsepower and refinement while reducing emissions and fuel consumption.

With three, four and six-cylinder variants, the all-aluminium Ingenium engines are built to maximise performance and environmental sustainability at the same time as driving down running costs for car owners.

The modular design enables both petrol and diesel engines to share many common internal components and calibration strategies. The configurable and flexible common architecture also enables maximum manufacturing efficiency, more variants, higher quality and greater speed to market. This reduces complexity, raises quality, simplifies manufacturing, and allows Jaguar Land Rover to react more quickly to changes in global demand.

A host of advanced technologies enables Ingenium engines to deliver a blend of high performance and low fuel consumption. Neatly integrated into the cylinder head of our petrol engines is an electrohydraulic valvetrain featuring patented control algorithms developed by Jaguar Land Rover. This enables fully variable control of intake valve lift for optimum power, torque and efficiency throughout the engine's operating range.

#### **About Jaguar Land Rover**

Jaguar Land Rover is the UK's largest automotive manufacturer, built around two iconic British car

brands. Land Rover is the world's leading manufacturer of premium all-wheel-drive vehicles. Jaguar is

one of the world's premier luxury marques, as well as being the first ever brand to offer a premium allelectric performance SUV, the Jaguar I-PACE.

At Jaguar Land Rover we are driven by a desire to deliver class-leading vehicles, providing experiences people love, for life. Our products are in demand around the globe and in 2019 we sold 557,706 vehicles in 127 countries.

We employ 40,000 people globally and support around 250,000 more through our retailer network, suppliers and local businesses. At heart we are a British company, with two major design and engineering sites, three vehicle manufacturing facilities, an Engine Manufacturing Centre and soon to be opened Battery Assembly Centre. We also have vehicle plants in China, Brazil, India, Austria and Slovakia. Three of our seven technology hubs are in the UK – Manchester, Warwick (NAIC) and London – with additional sites in Shannon, Ireland, Portland, USA, Budapest, Hungary and Changshu, China.

We have a growing portfolio of electrified products across our model range, embracing fully electric, plug-in hybrid and mild-hybrid vehicles, as well as continuing to offer the latest diesel and petrol engines, giving our customers even more choice.

We are confident that our comprehensive strategy, exciting pipeline of market-leading vehicles and innovative approach to technology and mobility will see us continue to progress towards Destination Zero, our mission to shape future mobility with zero emissions, zero accidents and zero congestion.