

JAGUAR LAND ROVER'S FUTURE AIR PURIFICATION TECHNOLOGY PROVEN TO INHIBIT VIRUSES AND BACTERIA BY UP TO 97 PER CENT

- **Prototype air filtration system has been proven to inhibit viruses and bacteria by as much as 97 per cent**
- **Technology that will be used in future Jaguar and Land Rover vehicles has also been tested against novel coronavirus (SARS-CoV-2*)**
- **Jaguar Land Rover commissioned independent research to assess performance in lab conditions**
- **World-leading research is the first milestone in ongoing research into air purification technology**
- **The advanced technology also deodorises and inhibits allergens and can create a cleaner air environment for the customer**
- **Cabin purification research is helping Jaguar Land Rover reimagine modern luxury, unique customer experiences, and positive societal impact**

Whitley, UK – Tuesday 16th March 2021: 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](#).

ENDS

Editors' notes

* SARS-CoV-2 is the name of the virus, which falls under the Coronavirus family of viruses. Covid-19 is the name of the disease the virus causes.

**nanoe™ is a trademark of Panasonic Corporation.

*** [Texcell research](#), 2020 carried out for and result supplied by Panasonic

**** Hydroxyl (OH) radicals are made up of oxygen and hydrogen atoms and naturally occur in the atmosphere. They are highly reactive particles that help inhibit viruses, bacteria, allergens and mould but through the nanoe™ X technology pose no harm to humans. Inhibit means to denature the particles and bacteria and prevents them from reproducing or growing.

[^] Models which offer nanoe™ technology include Jaguar I-PACE, E-PACE, F-PACE, XE and XF. Land Rover Defender, Discovery, Discovery Sport, Range Rover, Range Rover Sport, Range Rover Velar and Range Rover Evoque.

For more information about Jaguar Land Rover's Reimagine strategy please visit:
<https://www.jaguarlandrover.com/reimagine>

About Jaguar Land Rover: Reimagining the future of modern luxury by design

Jaguar Land Rover is reimagining the future of modern luxury by design through its two distinct, British brands.

Our current model range embraces fully electric, plug-in hybrid and mild-hybrid vehicles, as well as the latest diesel and petrol engines. Our class-leading Jaguars and Land Rovers are in demand around the world and in 2020 we sold 425,974 vehicles in 127 countries. Land Rover is the global leader of luxury SUVs through its three families of Range Rover, Discovery and Defender. Jaguar is the first ever brand to offer a premium all-electric performance SUV, the Jaguar I-PACE.

At heart we are a British company, with two major design and engineering sites, three vehicle manufacturing facilities, an Engine Manufacturing Centre and a Battery Assembly Centre in the UK. 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 Shanghai, China.

MEDIA INFORMATION



Central to our Reimagine strategy is the electrification of both the Land Rover and Jaguar brands with two clear, distinct personalities. All Jaguar and Land Rover nameplates will be available in pure electric form by the end of the decade. This marks the start of the company's journey to become a net zero carbon business across its supply chain, products and operations by 2039.

As a wholly owned subsidiary of Tata Motors since 2008, Jaguar Land Rover has unrivalled access to leading global players in technology and sustainability within the wider Tata Group.

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