

NEW JAGUAR LAND ROVER NOISE CANCELLATION TECH HELPS REDUCE DRIVER FATIGUE

- **Active Road Noise Cancellation helps remove unwanted sounds from the cabin**
- **Reducing low-frequency noise exposure can help prevent driver fatigue on longer journeys**
- **Tiredness increases average driver reaction time by 16%***
- **Active Road Noise Cancellation measures wheel vibrations and plays back noise cancellation through in-car speakers**
- **Technology introduced on new Jaguar F-PACE, new Jaguar XF and new Range Rover Velar**

Friday 9 October 2020, Whitley, UK – Jaguar Land Rover has revealed new noise cancellation technology that removes unwanted road and tyre sounds from the cabin and provides a quieter and more refined experience for drivers and passengers.

The technology, introduced on the new Jaguar F-PACE, new Jaguar XF and Range Rover Velar, is capable of lowering unwanted noise peaks by 10dB and overall noise levels by 3-4dB – the equivalent of turning down the in-car sound system by four ‘steps’. This significant reduction in exposure to low-frequency noises up to 300Hz can help prevent driver fatigue on longer journeys**.

Fatigue affects the ability of a driver to deal with hazards or unexpected events, with tired motorists recording an average reaction time increase of 16.72% compared to those fully alert*. Reducing accidents and improving driver wellbeing is a key part of Jaguar Land Rover’s journey to Destination Zero: an ambition to make societies safer and healthier and our environments cleaner through relentless innovation.

Active Road Noise Cancellation, enabled by Silentium’s Active Acoustics technology, uses sensors on each wheel to constantly monitor the vibrations from the road surface and calculates the opposite phase sound wave needed to remove the noise heard by the

occupants. By monitoring in real-time, unexpected noises from potholes or rough surfaces can be isolated and removed.

The cancellation sound is played through the Meridian sound system, with the vehicle monitoring cabin occupancy to optimise Active Road Noise Cancellation performance for all drivers and passengers. The technology offers a no-compromise solution to balancing refinement, vehicle weight and driving dynamics for a complete premium feel.

Active Road Noise Cancellation combines with Engine Noise Cancellation on the new Jaguar F-PACE and new Range Rover Velar with the P400e plug-in hybrid (PHEV) powertrain to further enhance the sense of wellbeing. The pioneering system allows the PHEV variant to be refined for lower CO₂ emissions and efficiency with no impact on driver experience.

Iain Suffield, Jaguar Land Rover Refinement Advanced Technologies Specialist said: "We are committed to creating a haven for our customers and this new technology allows us to remove unwanted noises from the cabin. It makes the experience more tranquil, improving passenger wellbeing and helping to reduce cognitive load and thus reaction times. This research is all part of the journey to Destination Zero."

Dr Steve Iley, Jaguar Land Rover Chief Medical Officer, added: "Active Road Noise Cancellation technology not only has the potential to improve road safety but also wellbeing and quality of life for our customers. In a post-coronavirus world, where a 'new normal' is emerging, we expect customer expectations of private transport to change. An extra focus will be placed on safe, clean mobility where personal space, wellbeing and hygiene carry a premium."

New technologies and materials are being developed to meet the changing mobility world at Jaguar Land Rover with today's vehicles designed to help improve passenger wellbeing, including a [Driver Condition Monitor](#) and Cabin Air Ionisation with PM 2.5 filtration.

ENDS

Editors' notes:

* National Center for Biotechnology Information: Research on the Relationship between Reaction Ability and Mental State for Online Assessment of Driving Fatigue

** National Center for Biotechnology Information: The Effect of Road Traffic Noise on Reaction Time

For more information about Destination Zero please visit:

<https://www.jaguarlandrover.com/2019/destination-zero>

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 all-electric 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.

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.

About Silentium

Silentium Ltd. is a high-tech company specializing in developing innovative Active Acoustic products and solutions with a global R&D and sales base.

Silentium's patented Active Acoustic Technologies and algorithms control personal sound spaces and eliminate unwanted sounds in everything from cars to commercial goods. The company's mission is to reduce the adverse effects of sounds on health, safety and privacy and to make it possible for each and every one to design their own acoustic experience. The company's solutions and products are currently embedded in various market applications around the world and its clients receive full guidance and support from the planning to the production stages.

For more information please visit:

www.silentium.com

Jaguar Land Rover PR social channels:

- Twitter: [@JLR_News](https://twitter.com/JLR_News)

- LinkedIn: [@JaguarLandRover](https://www.linkedin.com/company/jaguarlandrover)

MEDIA INFORMATION



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

Linda Luong

Corporate Affairs Officer - Global External Communications

lluong@jaguarlandrover.com

+44 7384 232691