



JAGUAR LAND ROVER UPCYCLES ALUMINIUM TO CUT CARBON EMISSIONS BY A QUARTER

- **REALITY project could help reduce aluminium production emissions by up to 26%**
- **Pioneering recycling process gives a second-life to premium automotive grade aluminium**
- **Results have revealed new alloy passes initial quality testing**
- **The research will help close the loop on precious raw materials as part of Jaguar Land Rover's journey to zero emissions**

Friday 21st August 2020, Whitley, UK – Research by Jaguar Land Rover has revealed how an innovative recycling process could upcycle aluminium waste from drinks cans, bottle tops and end-of-life vehicles into the premium cars of the future and reduce production CO₂ emissions by up to 26 per cent.

[The REALITY aluminium project](#) is a key part of Jaguar Land Rover's Destination Zero mission to reduce carbon emissions and its ambition to make societies safer and environments cleaner through relentless innovation. Engineers were able to use the recycled aluminium parts and mix it with a lower amount of primary aluminium to form a new and tested prototype alloy, comparable to the existing Jaguar Land Rover grade and quality.

Analysis of the recycling and manufacturing process revealed it has the potential to reduce alloy production CO₂ emissions by up to 26 per cent compared to the current automotive grade, helping Jaguar Land Rover further close the loop on its manufacturing and use of raw materials.

Aluminium is one of the most widely recycled materials in the world and can be melted down and reformed repeatedly without losing quality. Post-consumer recycled aluminium appears in everyday goods such as drinks cans, aerosols, foil food trays and bottle tops but is not widely used for high-end applications such as automotive manufacturing. Nearly 75 per cent

MEDIA INFORMATION



of all aluminium produced in the USA and EU is still in use today while the creation of recycled aluminium uses around 90 per cent less energy than raw material production*.

By recovering the high-quality automotive-grade aluminium used to manufacture vehicles, Jaguar Land Rover can re-use the premium properties as part of a blend, reducing the need for virgin aluminium in vehicle production. Typically, end-of-life vehicle scrap is exported overseas where it can be re-used for low-end applications, but new advanced separation technology has enabled it to be upcycled back into the automotive process, helping close the loop and reduce the environmental impact.

Gaëlle Guillaume, Lead Project Manager for REALITY at Jaguar Land Rover, said: “This project has allowed us, for the first time, to recover premium automotive-grade aluminium from scrapped vehicles and re-use its unique properties. The potential of this on the production process is a reduction in CO₂ impact as well as helping us re-use even more aluminium.

“As we move into an autonomous, connected and electrified future, with the potential of shared fleets being de-commissioned en masse, it could allow Jaguar Land Rover to engineer this closed loop recycling alloy into tight production schedules to further improve efficiency and environmental benefits.”

The £2 million project, co-funded by Innovate UK and in partnership with Brunel University, is helping Jaguar Land Rover extend its aluminium closed loop and recycling initiatives as part of Destination Zero. Jaguar Land Rover has already reduced its global operating CO₂ emissions per vehicle by 50.7 per cent since 2007 and remains committed to an ongoing decarbonisation process. Between September 2013 and March 2020, around 360,000 tonnes of closed-loop scrap have been processed back into the brand’s lightweight aluminium intensive architecture, across all vehicle lines including the Jaguar XE.

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Editors' notes:

* The Aluminium Association

For more information about Destination Zero please visit:
<https://www.jaguarlandrover.com/2019/destination-zero>

In 2014, Jaguar XE was the first vehicle in the world to use aluminium alloy grade RC5754 for its body panels, which contains up to 75 per cent recycled aluminium. Half of the XE body structure is made of aluminium alloy grades that contain an important amount of recycled aluminium content - made possible by a closed-loop manufacturing system at our UK and Slovakia facilities.

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.

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.

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