

PRESS RELEASE



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Ricardo advances hydrogen engine to support the decarbonisation of transport

Leveraging Ricardo's 100 year track record in engine development, the hydrogen engine could provide cost-effective, clean, trusted technology to decarbonise heavy duty vehicles which currently contribute a quarter of all on-highway transportation CO₂ emissions across the European Union

As part of its mission to support the decarbonisation of the global transport and energy sectors, Ricardo, a world-class environmental, engineering and strategic consulting company, has created a hydrogen-fuelled research engine which could offer a renewable, economic and durable technology solution to accelerate zero carbon emissions in heavy duty trucks, off-highway machines and marine vessels.

Ricardo will be testing the prototype at the state-of-the-art engine development facility at the University of Brighton – the company's long-term combustion engine research partner.

Drawing on the company's proven track record in engine development, and hydrogen technology integration, the test programme will evaluate the performance, efficiency and emissions of the engine to assess its feasibility as a future multi-cylinder engine which could be taken into production for Ricardo's global customers.

Adrian Greaney, Director of Technology and Digital at Ricardo Automotive and Industrial EMEA Division said "Green hydrogen has a critical role to play in our future energy and transport systems, particularly in reducing greenhouse gas emissions from hard to decarbonise sectors such as long-haul trucks, off-highway machines and marine. We are working with a range of clients on hydrogen and renewable fuels to reduce carbon emissions in these challenging sectors. This exciting project with the University of Brighton on hydrogen engine technology sits alongside our developments in hydrogen fuel cell systems to deliver cost effective, clean and efficient solutions for our global clients."

Dr Penny Atkins, Deputy Director of the Advanced Engineering Centre at the University of Brighton said: "Hydrogen combustion engines could offer a vital medium term solution to support decarbonisation in the heavy duty sector. The University of Brighton is really excited to be able to use its expertise in hydrogen combustion and engine test to support the development of this important technology."

The ongoing programme will use the real-world results from the hardware to validate methods applied in Ricardo's leading-edge digital tools. Virtual hardware optimisation and controls calibration will provide customer solutions that are more economic, efficient and sustainable.

The development of a hydrogen engine is a further boost to Ricardo's hydrogen capability, following its recent investment in a hydrogen development and test facility at its Shoreham Technical Centre. As on-highway original equipment manufacturers face stringent European emissions regulations: a 30% improvement against 2019 CO₂ fleet average by 2030, and an expectation that this target will be raised, Ricardo's hydrogen engine technology can help this transport sector progress towards achieving zero carbon emissions.

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About Ricardo

Ricardo plc is a world-class environmental, engineering and strategic consulting company listed on the London Stock Exchange. With over 100 years of engineering excellence, we provide exceptional levels of expertise in delivering leading edge and innovative cross sector sustainable products and solutions, helping our global customers increase efficiencies, achieve growth and create a clear and safer future. Our mission is clear — to create a world fit for the future. For more information visit www.ricardo.com

About Ricardo Automotive and Industrial Division

Ricardo Automotive & Industrial Ricardo Automotive and Industrial, a division of Ricardo plc, provides global engineering services for OEMs across all transport sectors. The vision is to be the consulting partner of choice for clean efficient, integrated propulsion and energy solutions, underpinned by digitisation.

Ricardo is a supporter of the UK Hydrogen Strategy Now campaign. This group of leading UK businesses which have together committed to invest £3bn into hydrogen projects and are calling on the Chancellor of the Exchequer for a UK-wide hydrogen strategy.

Ricardo is also a founder member of Hydrogen Sussex, an energy group comprising members from local authorities, academia, industry, transport and utilities committed to transforming the south coast of England into a national hub for green transport and energy.

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