

PRESS RELEASE

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Ricardo and LH Group to investigate in-service upgrade potential of rail diesel power systems

Ricardo and LH Group have announced their collaboration on a research and development programme that will pave the way for significant engine efficiency improvements

LH Group carries out the periodic overhaul of power equipment for much of the UK's diesel multiple unit (DMU) fleet: vehicles that are owned by the major rolling stock leasing organizations and operated by the various train operating companies holding service franchises. In order to assess the opportunities for in-service vehicle upgrades, LH Group wishes to investigate the potential operating cost improvements that could be made to existing rolling stock power systems.

Under the programme, LH Group and Ricardo will be concentrating on powertrain advancements to reduce lifetime rolling stock costs and operational energy consumption. The initial work will focus on the Cummins NT855 engine, which is used in many DMU applications.

Following this work, three routes served by DMUs will be selected for detailed evaluation of vehicle power systems. These routes will be chosen so as to provide a broad sample of operating conditions representative of UK train services for this class of vehicle, including both high speed and suburban sections with their contrasting station frequencies, as well as a wide range of track gradients. Using on-board acoustic data recording equipment fitted to the power cars of rolling stock on these selected routes, together with basic vehicle driveline and coast down data, a detailed map of engine speed and load will be generated for subsequent evaluation.

Commenting on commencement of this project, Ricardo director of rail vehicle technology, Jim Buchanan, said:

“Rolling stock operating cost is a crucial consideration for both train leasing and operating companies, not least due to the extended vehicle life expectations of the rail industry. Mid-life upgrades offer the opportunity explore measures to improve performance, reliability and the



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overall customer experience, and most crucially of all in a commercial railway environment, to optimize the underlying cost of operations for both vehicle owners and operators. We look forward to working with LH on the first stage of what we expect will be a highly interesting project as well as a value enhancing one for the vehicle leasing and operating companies.”

Geoff Childs, LH Group engineering director, added:

“This is a major programme that will bring long term benefits to operators. It brings together technological expertise that will undoubtedly provide end users with operating benefits. We are anxious to investigate the potential operating cost improvements that could be made to existing rolling stock power systems. For that reason we have selected Ricardo to partner us in the early stages of this work, drawing upon its extensive experience of diesel power systems for both rail as well as road-going and off-highway applications.”

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NOTES TO EDITORS:

Ricardo plc is a global, world-class, multi-industry consultancy for engineering, technology, project innovation and strategy. With almost a century of delivering value, we employ over 1600 professional engineers, consultants and staff. Our people are committed to providing outstanding value through quality engineering solutions focused on high efficiency, low emission, class-leading product innovation and robust strategic implementation. Our client list includes the world's major transportation original equipment manufacturers, supply chain organizations, energy companies, financial institutions & governments. Guided by our corporate values of respect, integrity, creativity & innovation and passion, we enable our customers to achieve sustainable growth and commercial success. For more information, visit www.ricardo.com.

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