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## **Ricardo consortium aims to meet the engineering challenge of biofuels**

**Ricardo today announced the formation of a consortium that is open to automakers, Tier 1 suppliers, oil companies, additive manufacturers and government agencies, with the aim of evaluating the impact of biofuels on current and future light duty engine technologies**

Concerns about carbon emissions and energy security are leading to a global increase in the use of biofuels within the traditional fuel supply chain for pump blends of gasoline and diesel. In addition to this, many regions are increasingly making higher biofuel blends available to consumers who wish to use these for financial or operational reasons or through personal concern for the environment. There are known engineering issues associated with the increased use of biofuels, and such areas of concern are likely to change and develop as new automotive powertrain technologies are deployed. By drawing together the skills and expertise of the consortium, Ricardo aims to use its own insights and research skills in new automotive technology to help the consortium members address some of the most pressing challenges of increasing biofuel use.

In terms of biodiesel in particular, areas of focus will include understanding the effect of the wide variability of fuel chemistry resulting from the very broad range of potential feedstocks, challenges of fuel storage resulting from instability and reactivity to air, and the potential for fuel dilution of lube oil. The work of the consortium will be structured as a series of modules. The first module focuses on the effect of biofuel content on diesel performance, emissions and economy using conventional and advanced combustion control systems. Three further modules are currently under consideration – investigating the effects of biodiesel on fuel in oil dilution and how advanced post injection calibration techniques can reduce the problem; the effects of biofuel content on gasoline performance, emissions and economy, and the effects of biodiesel on vehicle stability. This modular approach will enable a flexible scope to be

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developed, with content finalised and approved by the steering committees of each module, which will comprise members from all sponsoring organizations. This approach will maximize the benefits of the pre-competitive research to be carried out, enabling members to share costs while participating and paying solely for those aspects of most relevance to their respective businesses or regulatory responsibility.

Commenting on the launch of the new consortium, Ricardo project director for fuels and lubricants Craig Goodfellow said:

“The increasing use of biofuels offers some potentially attractive benefits in terms of reduced global carbon emissions and increased energy security through diversity of fuel resources. However, for biodiesel in particular, the challenge of creating stable and consistent supplies of fuel and engineering the powertrain system to operate without detriment to performance and durability is both complex and considerable. By drawing together this pre-competitive consortium of interested partners, we aim to focus research and help chart the means by which such challenges can be addressed.”

The consortium Module 1, which is part-funded by the UK Government’s Department for Transport, is formally launched today but will remain open to applications from prospective members throughout the duration of the work. Organizations wishing to register an interest in participating in Module 1 or in any of the future modules, or to obtain further information, should contact [F&LConsortium@ricardo.com](mailto:F&LConsortium@ricardo.com).

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## NOTES TO EDITORS:

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