Ricardo Benchmarking benefits

Ricardo offers a wide range of benchmarking services that enable robust technical and commercial comparisons to be made, helping customers develop a more competitive future product strategy.

Key benefits of the Ricardo service:
- Broad ranging product knowledge, engineering expertise and benchmarking test and evaluation facilities for engines, drivelines, transmissions, battery systems and vehicles.
- Access to extensive internal Ricardo databases of benchmark information including many off-the-shelf reports on market-leading products.
- Evaluation against the processes and design guidelines of Ricardo’s world class in-house design team.
- Technical commentary by experienced engineers.
- Independent of any OEM, supplier, technology etc.
- Choose only what you want, no subscription fee.
- Arrange meeting at Ricardo UK sites to view the vehicle, machine etc. and discuss the report with the engineers who conducted the study and wrote the report.
- Consortium members can influence future benchmark priorities.

Benchmarking capabilities:
- Design
- Cost
- Individual components to complete systems
- Hybrid & EV systems
- Powertrain performance & emissions
- NVH

Ricardo’s benchmarking activities provide a valuable mechanism for customers to assess the competitiveness of their own products in a highly objective and informed manner.

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For more information please contact:

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Ricardo design benchmarking reports evaluate all aspects of design competitiveness, including materials evaluation and component weight analysis. Recent reports include:

- Audi 3.0-litre TDI V6
- BMW B38 1.5-litre IL3
- Mercedes M274 2.0-litre IL4
- PSA EB2DTS 1.2-litre IL3 PureTech
- MAN D3876 15-litre IL6
- Mercedes OM471 12.8-litre IL6

To date in excess of 30 detailed reports have been created and are available to purchase by members of the consortium.

The members of the SONAR consortium drive the benchmarking agenda and typically they select 1-2 new powertrains each year to form the basis of future NVH benchmarking. Recent reports include:

- MY2016 Chevrolet Volt
- MY2016 Volvo XC90 T8
- MY2016 Audi A3 e-Tron
- MY2015 Volkswagen e-Golf
- MY2015 Honda Civic Hybrid

EconoMark

CO₂ reduction technologies and calibration strategies

The Ricardo EconoMark service focuses on benchmarking the latest low CO₂ passenger cars featuring state-of-the-art powertrain technologies. The EconoMark commercial model allows Ricardo to offer this quality benchmarking service at an attractive price. Recent reports include:

- Mercedes C250 2.1ltr Diesel Euro5 specs(OM651) - Engine Friction Teardown
- BMW Mini - 92g/km CO₂ - 1.5ltr 3-cylinder Diesel Euro6 specs - Engine Mapping on Testbed
- BMW Mini - 92g/km CO₂ - 1.5ltr 3-cylinder Diesel Euro6 specs - Vehicle Tests
- BMW Mini - 92g/km CO₂ - 1.5ltr 3-cylinder Diesel Euro6 specs - Engine Mapping on Testbed
- VW Golf - 112g/km CO₂ - 1.4ltr 4-cylinder Gasoline with Cylinder Deactivation - Engine Mapping on Testbed
- VW Golf - 112g/km CO₂ - 1.4ltr 4-cylinder Gasoline with Cylinder Deactivation - Vehicle Tests
- BW Twin Power N20 2.0L • VW 1.4L TSI ACT • BMW/Mini B38 1.5L gasoline

The next scheduled full transmission benchmark project will cover the ZF 9HP gearbox.

Hybrid & EV systems

Benchmarking comparisons across battery, motor, power electronics, charging, thermal and other xEV related systems

Ricardo xEV benchmarking services include a mix of custom and standard reports associated with the following:

- MY2016 Chevrolet Volt
- MY2016 Volvo XC90 T8
- MY2016 Audi A3 e-Tron
- MY2015 Volkswagen e-Golf
- MY2015 Honda Civic Hybrid
- MY2014 BMW i3
- MY2014 Chevrolet Spark EV
- MY2014 Acura RLX Hybrid
- MY2013 Tesla Model S
- MY2013 Ford C-Max Energi

SONAR – NVH

SONAR is an international automotive powertrain NVH consortium organized and led by Ricardo for over 10 years

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