



HIGHLY CHARGED DEVELOPMENT AND VALIDATION

Lotus Engineering is leading the way in the fast-moving development of hybrid and electric vehicles, utilising a wide range of virtual and physical testing from the component level to the vehicle level, across the entire development process. Our extensive powertrain development facilities in Europe and North America are constantly expanding to meet the increasing demands of powertrain electrification.

As an engineering consultancy and manufacturer of premium cars designed to excite and perform, our breadth of technical knowledge is unrivalled. Our multi-skilled engineers and technicians have extensive experience in developing a wide range of electrical and mechanical drivetrain systems.

Lotus Engineering is dedicated to meeting our clients' programme objectives on time, every time.



DRIVETRAIN DEVELOPMENT

- Whole drivetrain development
- Inverter and motor characterisation
- Electric motor development
- Drivetrain durability testing
- Component and subassembly testing
- Drivecycle simulation

RANGE EXTENDER DEVELOPMENT

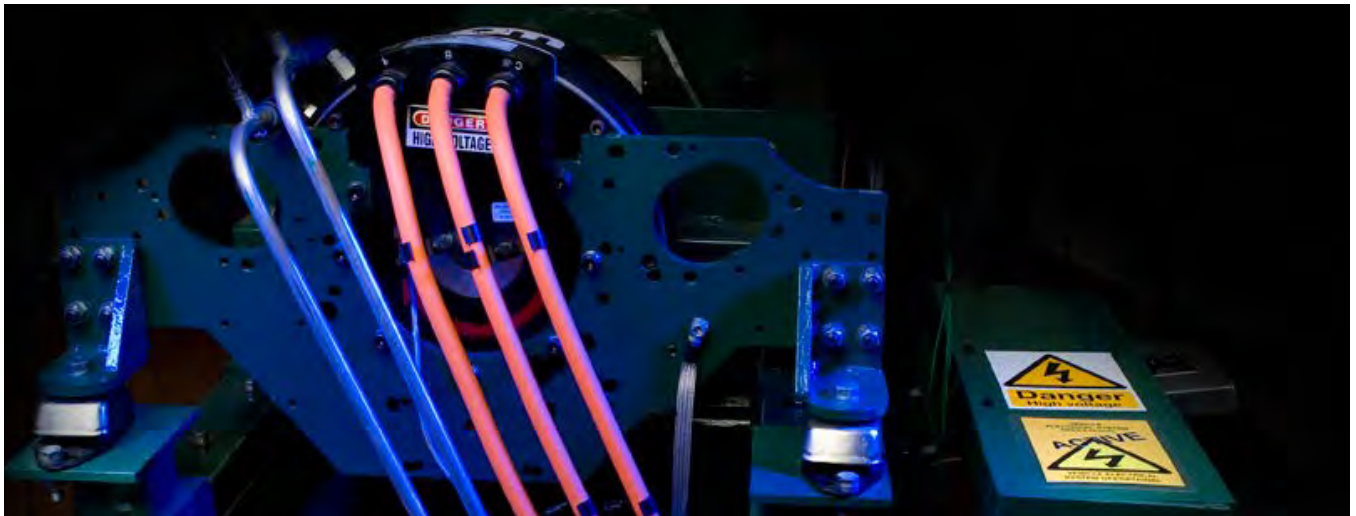
- Combustion engines and hydrogen fuel cells
- Efficiency mapping
- Series hybrid control strategy development
- Power quality analysis
- Thermal mapping

BATTERY SIMULATION, DEVELOPMENT AND BUILD

- Design for manufacture, build and testing in a dedicated safe environment
- Emulation of high performance batteries
- Simulation of high voltage 800 V DC
- Optimisation and evaluation of electric modules and power electronics

VIRTUAL DEVELOPMENT

- Model, software and hardware in the loop testing
- Model based development correlation with test data and system characterisation



SPECIALISED TEST FACILITIES

<p>Electric Drivetrain Development and Validation</p>	<ul style="list-style-type: none"> • Fully flexible dedicated electric drivetrain test-beds • Battery simulators up to 800 V, 600 A • 80-400 kW motoring and absorption dynamometers • Precision data acquisition up to 0.01 % accuracy
<p>Whole Vehicle Development</p>	<ul style="list-style-type: none"> • Dedicated electric vehicle and hydrogen fuel cell vehicle workshop • High voltage battery charging stations • 60 kW chassis dynamometers • 150 kW SAC NVH dynamometer • Euro 5 emissions analysis
<p>Virtual Testing and Development</p>	<ul style="list-style-type: none"> • SiL - software in loop • MiL - model in the loop • HiL - hardware in loop • DiL - driver in the loop • dSPACE rapid prototype system • IPG HiL system • Integration with Lotus analysis software

LIGHTWEIGHT ARCHITECTURES - EFFICIENT PERFORMANCE - ELECTRICAL AND ELECTRONIC INTEGRATION - DRIVING DYNAMICS



UNITED KINGDOM

Potash Lane
Hethel, Norwich
NR14 8EZ

Phone: +44 (0)1953 608423
eng-uk@lotuscars.com