

MAHLE Powertrain Engineering **Services Provider**

Experienced Engineering Services Provider

Knowledge Powering Innovation

Supporting Global Customers



Car on 4WD dyno with altitude simulation

MAHLE Powertrain

- **Advanced Internal Combustion Engines**
 - **Extensive Electric Propulsion Knowledge**
- **Innovative Powertrain Solutions**

MAHLE Powertrain is a global Engineering Consultancy that specialises in the design, development and integration of advanced internal combustion engines and electrified powertrain systems.

As recognised experts in these fields, MAHLE Powertrain is engaged in the extensive research, development and application of new traditional and advanced drivelines into cost-effective, production feasible solutions for enhanced efficiency, improved fuel economy and lower emissions.

With eight technical centres strategically located in the UK, Germany, USA, China and Brazil, MAHLE Powertrain is well positioned to deliver innovative solutions around the globe. MAHLE Powertrain has around 250 employees based in the UK and 450 in total worldwide.

The new Real Driving Emissions Centre (RDEC) at our Northampton, UK headquarters offers 4WD vehicle emissions development testing with both altitude and climatic simulation capability and is the only one of its type in the UK. The engine and vehicle emission test facilities at our Plymouth, MI facility in the USA have recently received accreditation from the California Air Resources Board (CARB) - currently, the only independent test facility in North America to achieve this status.

Contact Us: Powertrain@mahle.com

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MAHLE Powertrain - Enigneering Services Provider

Key Capabilities

- **Powertrain Concepts**
- **Feasibility Studies**
- **Detailed** Design
- Analysis and Simulation (1D & 3D)
- Driveline Modelling
- Combustion Research
- Performance & Emissions Development
- Driveability & OBD Calibration
- Thermodynamic Analysis
- **Powertrain Controls**
- MAHLE Flexible ECU (MFE)
- Powertrain Installation & Integration
- **Packaging Studies**
- Electrification & Hybridisation
- Prototype Engine Build
- **Demonstrator Vehicle Build**
- **Battery Design & Testing**
- eMotor Design & Testing
- Electrical Systems Development

Optimised solutions in the key areas for our customers

MAHLE Powertrain provides a broad spectrum of skills and capabilities to our global customers. With expert knowledge and a detailed understanding of new technologies, MAHLE Powertrain supports the automotive industry with optimised solutions.



>> Engine Test Cell with Quick Change Pallet System



>> 48V Battery Pack

Tools & Test Facilities

- Engine & transmission test beds transient & steady state
- Chassis dynos 4WD altitude, climatic & ambient
- Transient test bed with battery emulator
- Fully equipped vehicle workshop
- Engine & transmission build & instrumentation shop
- Dedicated friction teardown cell
- Port flow & valve motion rigs
- Multi-fuel handling capability
- Secure vehicle compound



>> eBoost Downsizing Engine



>> Hybrid Drive Configurations

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