

MAHLE Powertrain Vehicle Build & Test

State of the art facilities

Fully certified by the VCA

Leaders in RDE Development



Vehicle Build

MAHLE Powertrain's Vehicle Engineering Centre is fully equipped to undertake a wide variety of vehicle build activities to support external customers, research programs or internal projects.

Using experienced and skilled technical staff, our confidential and secure facility can offer:

- Vehicle scanning for package studies with FARO FaroArm™
- Body-in-White / chassis modifications
- Electrical harness design and manufacture
- Electrical system installation
- Independent control systems using MAHLE Flexible ECU
- ICE, Hybrid and BEV vehicles
- Vehicle instrumentation & data logging
- Preparation for emissions testing / catalyst swaps
- Benchmarking studies
- Secure compound for customer vehicles
- Fabrication capability



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Vehicle Emissions Testing

MAHLE Powertrain has recently improved its vehicle test capability at its Northampton, UK headquarters to include a fully climatic and altitude capable 4WD chassis dyno capable of running Euro, US, Japanese and Chinese cycles in order to develop and validate RDE compliant vehicles.

- Horiba analysers for gaseous emissions, Pn/Pm
- FTIR for speciation work
- VCA certified to Euro 6
- Multiple soak areas at varying temperatures for test vehicles

| Three Vehicle Test Chambers: | | | |
|------------------------------|----------|-------------------------|--|
| Chamber | EDC #1 | EDC #2 | RDE #1 |
| Configuration | 2WD | 2WD | 4WD |
| Environmental Simulation | 25 deg C | -40 deg C to + 50 deg C | -40 deg C to + 60 deg C -100m to + 5000m barometric chamber |
| Emissions | Euro 6b | Euro 5 | Euro 6c, US SULEV |
| Speed, Km/h | 190 | 190 | 250 |
| Force, N | 8000 | 8000 | 6400 (12500)¹ |
| Power, kW | 200 | 200 | 230/230 (450/450)1 |
| Per axles limit, kg | 2000 | 2000 | 2500 |

Vehicle PEMS Testing

MAHLE Powertrain's new PEMS testing capability complies with all the latest documented EU requirements and, with the ability to provide related support for the in-depth analysis of the resulting data, MAHLE Powertrain is clearly demonstrating its commitment to meeting our customer's vehicle development requirements now and well into the future.

- First company in UK to obtain VCA approved routes
- Routes start / stop from Northampton site
- 2 x Horiba OBS-ONE PEMS (Inc. PN) systems
- In vehicle equipment packaging
- Installations in over 60 vehicle types
- Testing on gasoline, diesel & hybrid vehicles
- Range of vehicles from 40kW to 400kW tested



