

## Propulsion Development and Emissions Testing

Accelerating cleaner, compliant, and efficient propulsion systems.

At HORIBA MIRA, we deliver end-to-end propulsion and emissions development services, enabling OEMs, Tier 1s, and innovators to meet global emissions legislation, optimise real-world energy efficiency, and accelerate electrified powertrain delivery.

From Euro 6e and Stage V to future-ready EU7 compliance, our industry-leading facilities and technical experts provide trusted support across combustion, hybrid and electric platforms.

### Electrified Propulsion Testing

Advanced xEV test and characterisation across lab and real-world settings.

- Range, energy use and charging profile analysis
- Hioki charge/voltage/current measurement systems
- BEV/HEV/PHEV compliance and development

### Real World Emissions (RDE and PEMS)

Capturing in-service emissions and energy use with portable test systems.

- 4 x HORIBA OBS-ONE units with broad EFM range
- Light, heavy duty and NRMM applications
- International test route support

### Complete Capability, Trusted Delivery

### Emissions Testing and Certification

Delivering certification and development testing to meet global regulatory demands.

- WLTP, RDE, Euro 6e, Euro VI, NRMM Stage V, Euro 7
- UNECE Reg 83, 101, 154, 168, 103
- Global protocol familiarity (US, China 6, Japan, India)
- ISO17025 accreditation and VCA appraisal

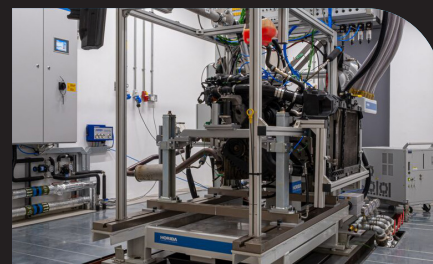
### Engine and Powertrain Development

Optimising combustion and hybrid systems from concept to durability.

- Specialist fuels, calibration and aftertreatment testing
- Real-time Engine-in-the-Loop and dynamic DOE
- Altitude, humidity, and thermal emulation testing

### Why HORIBA MIRA?

- Independent, turn-key and confidential services
- Embedded HORIBA Intelligent Lab and Road-to-Rig solutions
- Full digital twin and XiL integration
- Vehicle, powertrain and component test centres
- Seamless support from prototype to production



HM-F-PDET-GBR-25-V1

## Propulsion Development and Emissions Testing

### Vehicle Propulsion Centre

Versatile vehicle testing for emissions, efficiency, and strategy validation.

- 4WD, RWD, and FWD – up to 300kph
- -20°C to +35°C climatic control
- Gasoline, diesel, biofuel, and alternative fuels
- CVS tunnel, FTIR, SPN10, NOx speciation
- Robot driver capability
- Investment into EU7 readiness
- Accurate replication of any drive cycle

### Powertrain Propulsion Centre

High-precision transient powertrain development and emissions measurement.

- High speed engine dynos up to 470kW / 1000Nm / 10,000rpm
- Low speed, high torque dyno 220kW / 3200Nm / 3,200rpm
- AVL X-ion, HORIBA MEXA, ONE QL-NX, SPN10
- Altitude: -2000 to +5000m, temperature -45°C to +50°C
- Thermal encapsulation and humidity control
- Calibration tools: ETAS INCA, ATI Vision
- Full digital twin development via Road-to-Rig

### Real-World Propulsion Centre

Portable emissions measurement and real-world testing of all vehicle applications.

- 3-bay workshop and vehicle prep space
- Light, heavy duty and NRMM support
- Emissions, GPS, CAN, ambient and fuel analysis
- Expertise in niche instrumentation

### Standards and Accreditation

#### UK/EU Scope

- Euro 6e WLTP and RDE
- Euro VI Step E PEMS and VECTO
- NRMM Stage V ISM
- UNECE Reg 83, 101, 154, 168, 103
- ISO17025 via UKAS
- Appraised by VCA

#### Global Familiarity

- US/ Federal, China 6, Japan, India and other markets