



AVL North America Test Cell Services

PLYMOUTH AND ANN ARBOR TECH CENTERS

CONTACT

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AVL NORTH AMERICA TECHNICAL CENTERS

- Located in Plymouth and Ann Arbor, Michigan
- LAB Accredited Facility
- ISO 9001 Certified
- ISO 14001 Certified

SCOPE OF SERVICES

- System engineering and requirement development for powertrain systems
- Powertrain component and integration design / simulation
- Emission testing on chassis dynos and on-road
- Battery pack assembly and testing
- Vehicle integration, demo vehicles build-up
- Engine and transmission calibration
- Drivetrain electrification and software / controls
- Vehicle fleet test management and operations
- Benchmarking and vehicle drivability assessment
- Supplier assessment and quality development

FACILITY OVERVIEW

- 11 Performance and Emission Development Test Cells
- 3 Certification Test cells – 1065 Compliant
- 2 Single Cylinder Research Engine Test Cells
- 4 Powertrain Test Cells
- 4 Battery Test Cells
- 1 E-Motor Test Cell
- Confidential Customer Workshops

POWERTRAIN TESTBED 1 TEST CELL CONFIGURATION

- Four 220kW PMM dynos
- AVL PUMA Open 2™ and AVL ISACT™ control
- Vehicle simulation
- Gearshift actuator
- Conditioning systems for engine, oil and ATF fluids

SERVICES

- Functional testing
- Powertrain calibration and integration development
- Accelerated key-life tests for transmissions and power packs
- E-Axle Testing



POWERTRAIN TESTBED 2 TEST CELL CONFIGURATION

- Two 157kW PMM dynos
- AVL PUMA Open 2™ and AVL ISAC™ control
- Vehicle simulation
- Gearshift actuator
- Conditioning systems for engine, oil and ATF fluids

SERVICES

- Functional testing
- Powertrain calibration and integration development
- Accelerated key-life tests for transmissions and power packs
- E-Axle Testing

POWERTRAIN TESTBED 3 TEST CELL CONFIGURATION

- Three 460kW AC dynos
- AVL PUMA Open 2™ and AVL ISAC™ control
- Conditioning systems for engine, oil and ATF fluids

SERVICES

- Functional testing
- E-Axle Testing

POWERTRAIN TESTBED 4 TEST CELL CONFIGURATION

- One 800kW APA dyno
- AVL PUMA Open 2™ and AVL ISAC™ control
- Vehicle simulation
- Gearshift actuator
- Conditioning systems for engine, oil and ATF fluids

SERVICES

- Functional testing
- Powertrain calibration and integration development
- Accelerated key-life tests for transmissions and power packs
- E-Axle Testing

ENGINE DEVELOPMENT TESTBED

- Dynamometer (active) range between
 - 220 kW (900 Nm, 10,000 rpm)
 - 250 kW (525 Nm, 1,000 rpm) x 2
 - 330 kW (700 Nm, 10,000 rpm)
 - 330 kW (1,400 Nm, 8,000 rpm)
 - 440 kW (1,850 Nm, 8,000 rpm)
 - 460 kW (1,000 Nm, 9,000 rpm) x 4
 - 500 kW (3,000 Nm, 3,300 rpm)
 - 660 kW (4,400NM, 3,500 rpm)
 - 800 kw (3,400NM, 8,000 rpm)
- AVL PUMA Open 2™ and AVL SANTORIN Host™ testbed control systems
- AVL CAMEO™ / RTC available
- Raw gas and particulate measurement, emission testing
- Engine fast change pallet system
- Deep thermal shock test capability to -30°C
- Multi-fuel capability (gasoline/diesel/special fuels)
 - 7 tanks available
 - Ethanol capability

FUEL SUPPLY SYSTEM

- 6-Line fuels supply for each testbed
- Barrel fuel storage
- Fuel station for vehicle fueling

BATTERY LAB

- 6-line fuels supply for each testbed
- Barrel fuel storage

ADDED VALUE

- Confidential vehicle workshop and vehicle parking area with electric charging
- Ample Capacity – for everything from single projects to complete, experienced turnkey solutions
- Solid Value – through a combination of experience, array of solutions, proximity to the customer, and listening to the specific challenge at hand

FOR FURTHER INFORMATION PLEASE CONTACT:

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