



Excellence in drivetrain testing

Drivetrain benchmarking

VEHICLE SCANNING...



Each on roads, not one to five people have four tires, a



TOP SPEED

0-100

ACCELERATION

0-100

CONTROL

0-100

STRENGTH

0-100

DURABILITY

Transmissions
and drivetrains in
competitive comparison

Our benchmarking for your transmission development and vehicle optimisation.

Would you like to know what developments your competitors offer and how good their technologies are? Find out fast and thoroughly with vehicle benchmarking from ATESTEO.

Working close to our customers:

In tests on the full vehicle and drivetrain, we determine the driveability, performance, efficiency, and economy of the competing product. We support you in advance to specify tests of the drivetrain so as to work precisely.

Proven infrastructure:

Our own dynamometer and in-house test track, along with a number of drivetrain testing test benches and a variety of test bench equipment, enable ATESTEO to test all types of transmissions with every type of drive system.

Own measurement technology:

We conduct all vehicle and test bench tests in house using our own measurement technology.

Great expertise in electric and hybrid drive systems:

We have HV-certified electronics engineers, in-house HV measurement technology (DC/AC), YOKOGAWA measurement systems, and experience in benchmarking on BEV/PHEV/HEV in vehicles and on test benches.

“With our benchmarking we provide our customers with detailed knowledge about the latest developments and technologies.”

Peng He
Head of Testing Related Engineering

You never stop learning: knowledge transfer with ATESTEO benchmarking.

By examining, testing, and analysing the drivetrain of the competitor’s vehicle for you, we provide you with all the important data to learn from the disadvantages as well as the advantages of other developments.

You can allow this knowledge to flow into your prototypes and vehicle developments. With our wide range of drivetrain test benches, highly-developed own measurement technology, and vehicle tests on the dynamometer, test track, and roads, we offer you a complete benchmarking programme from a single source with the highest degree of measurement accuracy. Whether best practices or specific comparisons – by observing and analysing suitable vehicles of other manufacturers, ATESTEO opens up knowledge and ways for you to optimise your products, processes, and technologies and to increase your competitiveness.

The advantages of ATESTEO benchmarking for you

- Individual measurements according to customer specifications
- Benchmarking on the entire drivetrain
- Tests for all types of transmissions and drive systems
- Technical support in creating test specifications
- Worldwide procurement of the target vehicle and components
- Combination of tests on vehicles and test benches
- Robust processes and high measurement accuracy



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Vehicle drive system benchmarking in the vehicle and on the test bench.

Through our expertise and years of experience in engineering, along with a complete testing infrastructure of test benches, test track, and in-house measurement technology, we offer you a broad range of services for vehicle drivetrain benchmarking from a single source – for all types of transmissions, independently of drive system. Both conventional and modern electric and hybrid drive systems are tested, evaluated, and analysed during benchmarking at ATESTEO.

Our benchmarking programme for you:

	Performance and driveability tests: Acceleration, braking (recuperation), driving modes, driving resistance, driving behaviour, charging characteristics for electric and plug-in hybrids
	Tests of driveability, controllability, shiftability, shifting comfort: Load change behaviour driving/braking, shiftability, shifting comfort, activation and deactivation of ICE in hybrid drive systems
	Functional tests: Analysis and evaluation of driving strategies, analysis and comparison of the offered driving modes, description and testing of special functions
	Thermal management tests: Evaluation of thermal management in electric vehicles and hybrid vehicles
	Fuel economy and consumption tests: Measuring fuel and power consumption/electric range of the vehicle on the dynamometer and roads, analysis of energy management, retention period/operation of subsystems for cycle and road measurements
	Reliability/Recording road load profiles: Road measurements with relevant load, measurement runs for creating load profiles, load profiles for systems and components, creation of test specifications
	NVH: Capture and recording of noises relevant to the drivetrain
	Testing the efficiency of the drivetrain with a high degree of accuracy: Efficiency of the mechanical and electronic components and efficiency of the entire drivetrain

Our benchmarking procedure

Preliminary stage

- Agree on the goals and general conditions; create the test specifications in close cooperation with the customer
- Procure the vehicle and components (for example, the transmission for installing the measurement equipments)

Next steps

- Decode the CAN signals
- Feasibility study – sensors assembly
- Install and validate the measurement equipments in the vehicle and on the components

Execution

- Execute the run-in programme
- Execute the measurement programme in the vehicle on the dynamometer, road, or test track
- Prepare and implement the measuring programmes on the test bench, if necessary

Overview of results

- Dismantle the measurement equipments from the vehicle
- Evaluate the measured data; vehicle evaluations
- Document and complete the project (if necessary, send the test components to the customer)

Would you like to learn more about the services and advantages we offer you with our benchmarking programme for developing and optimising your prototypes, vehicles, and models? Just give us a call or send us email! Your ATESTEO engineering and benchmarking expert Peng He would be pleased to assist you at +49 2404 9870-759 or by email to Peng.He@atetesteo.com.



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