

Vehicle Conversions

Overview brochure

Production vehicles can be individually converted into practical training vehicles. Depending on the training objective, we integrate measurement access points, breakout systems, fault simulations and additional diagnostic options directly into the existing vehicle. Gasoline, diesel, hybrid, plug-in hybrid and electric vehicles can be individually equipped according to the vehicle technology, available installation space and desired scope of training.



Customized configuration

Adaptation to the vehicle and training objective

Original technology

Work on the real vehicle system

Measurement technology

Breakout boxes and 4 mm measurement access points

Fault simulation

Manual, electrical or web-based



Examine modern diesel technology directly on a production vehicle

The reference setup is based on a modern common-rail diesel vehicle. Comparable training vehicles can also be implemented using other suitable vehicle models.

In addition to engine management, complex exhaust aftertreatment and electrical diagnostics can be examined together under realistic operating and fault conditions.

- Up to 30 faults Extensive fault simulation
- Breakout system Electrical measurements directly in the system
- Lockable fault-simulation cabinet
- Ground faults
- SCR / DPF Modern diesel exhaust aftertreatment
- OEM system Original control units and components
- Open circuits
- Short circuits to positive

The number and type of measurement points, breakout systems and fault options are defined according to the vehicle and training objective.



Integrate measurement technology securely into the vehicle

In this configuration, extensive breakout systems were integrated into the rear vehicle interior. This keeps the measurement panels readily accessible without filling the engine compartment with additional large control elements.

Open circuits as well as ground, positive and resistance faults can be introduced deliberately. The configuration and number of fault options can be defined for each project.

- Interior installation Protected breakout integration
- Fault simulation Different fault types
- 4 mm technology Measurement and disconnection options
- OEM drivetrain Diagnostics on the real engine-management system



ITEM NO. 000F9118

VW Golf GTE plug-in hybrid training vehicle

Like-new, fully functional VW Golf GTE with extensive didactic preparation for training and diagnostic purposes.

The vehicle includes its registration document, two keys, diagnostic-capable control units and vehicle-specific circuit diagrams on digital media.

In addition to the standard equipment, ACC and lane-keeping assist are fitted. This allows modern driver-assistance and communication systems to be included in training alongside the drivetrain and high-voltage technology.

- Plug-in Hybrid Combustion engine and high-voltage drivetrain
- 60 engine faults 30 dual-assigned fault switches
- Permanently installed lockable HV fault-simulation unit
- Dual assignment for a total of 20 HV faults
- 20 HV faults 10 dual-assigned fault switches
- CAN bus Measurement, fault simulation and evaluation
- At least 10 numbered toggle switches
- Permanently installed HV socket box

The combination of high-voltage measurement technology, an engine-management breakout system, extensive fault simulation and CAN-bus evaluation enables diagnostic exercises across multiple interconnected vehicle systems.



Examine combustion and high-voltage systems together

Depending on the hybrid concept, the combustion engine, electric machine, high-voltage components, power electronics, energy storage and low-voltage electrical system can all be included in training.

The scope and position of additional measurement and diagnostic systems are individually adapted to the respective vehicle.

- High voltage HV components and energy storage
- Diagnostics Original vehicle communication
- Hybrid Interaction of multiple drive systems
- Measurement technology Customized measurement access