



# EDUCATIONAL HYBRID ENGINE TRAINER

A1/L3

Product number  
MVHY01



Fully operational hybrid electric system with petrol internal combustion engine mounted in a mobile frame. The hybrid system is designed to demonstrate the internal combustion engine, electric motor, gearbox and structure of the rechargeable energy storage system. The educational training engine is based on Toyota original (refurbished) engine.

The training engine model with functional gasoline/electric hybrid powertrain is a great educational tool that allows students to learn the components of the hybrid system, power supply system, rechargeable energy storage system and cooling system. It also allows to study components and operation modes of the engine, perform various measurements, tests and other diagnostic procedures.



## Features

- Includes the Toyota Hybrid Control System II (THS-II) with a fully operational petrol/electric engine.
- Supports diagnostics through an OBD 16-pin diagnostic connector, including fault code reading/erasing, live data display, and ECU configuration.
- Equipped with banana plug jumpers for detailed electrical signal measurements of each system component.
- Capable of simulating over 50 faults by disconnecting banana plug jumpers, enhancing troubleshooting practice.
- Fully functional automatic climate control system with an electric AC compressor and R134a refrigerant.
- Includes removable safety panels to protect against hot and rotating parts and an integrated emergency stop button.
- Provides an electrical wiring diagram for fault simulation and measurements.





## Value for Students

- Provides easy, safe, and comfortable training that builds confidence, using OEM components to offer a realistic car repair experience.
- Gain hands-on experience with a functional gasoline/electric hybrid engine stand, understand gasoline/electric TOYOTA HYBRID CONTROL SYSTEM – II (THS-II).
- Learn about gasoline/electric engine automatic gearbox, climate control system, instrument cluster, cooling system, electric power supply system, CAN gateway network, the exhaust system and more.
- Study and analyze electrical circuits through built-in banana plug jumpers, simulate system faults.
- Develop troubleshooting skills by simulating over 50 system faults with easy and safe electrical board.
- Measure the exhaust gas before and after catalytic converter using specific tools.
- Learn about modern climate control systems, including the electric AC compressor and refrigerant management and more.
- Practice safe engine servicing and maintenance with removable safety panels and accessible engine components.
- Use OBD II 16 – pin diagnostic connectors for ECU identification, fault code management, real-time parameter monitoring, throttle calibration and more.



## Value for Instructors

- Provides easy, safe, and comfortable training that builds confidence, using OEM components to offer a realistic car repair experience.
- Compact and secure, with wheels for enhanced mobility and efficient use of classroom space. Durable and light construction from steel frame to make it long lasting and safe to use. Closed panels and internal wiring makes it safe to use and ensures accidental damage to sensitive training stand parts. Safety removable panels to protect against hot and rotating parts.
- The engine external components is clearly visible under removable safety panels. Easy to access for service and maintenance.
- Integrated emergency stop button.
- Uses OEM automotive parts for an authentic and practical learning experience. Students gets real experience with all parts and functions exact as in real cars.
- Use advanced, hands-on training equipment to demonstrate key automotive systems and diagnostics.
- Easier real-time monitoring and fault simulation to improve student understanding and troubleshooting skills.
- The TOYTOA-based system allows students to be trained in diagnostics using almost any multibrand, specialized or OEM scan tools, ensuring a safe and high-quality learning environment.
- Engine on castors version, which is mobile and space saving in the classroom, allows concurrent use by multiple students, promoting collaborative learning and practical training opportunities.
- The training stand is designed for simplicity, requiring only small adjustments to reset to default parameters, making it easy to prepare and start each lesson quickly and efficiently.



## Specifications

- Dimensions: 1300 x 900 x 1550 mm (51.18in\*35.43in\*61.02in)
- Weight: approx. 190 kg (418 lb)
- Product number: AE34501WM