GASOLINE-ELECTRIC HYBRID ENGINE TRAINING BENCH – LIVE ENGINE

DL DM45

LEARNING EXPERIENCE

This demonstration panel is designed based on the Toyota Prius's gasoline-electric hybrid power engine. It can simulate engine start-up, speedup, slowdown and other actions with the aim of illustrating the structure and working principle of gasoline and electric hybrid power engines. The device applies to theoretical teaching and maintenance training of the gasoline and electric hybrid power engine for secondary vocational skill schools.

GENERAL CHARACTERISTICS

- Dim. mm (HxLxW) : 1800x1800x1000
- Weight approx. 500 kg
- Fuel No.: RON 92 or 95
- Fuel tank size: 10L
- Operating voltage: 12V DC
- Operating functioning temperature: -40°C to +50°C

MAIN CHARACTERISTICS

The didactic system shows a real and operable gasoline and electric hybrid power engine used to illustrate the structure and working process of the engine.
The trainer is composed of a synoptic panel and a live engine.

Main component:

- Detection control panel (with various detection terminals)
- Engine assembly
- Automatic transmission assembly
- Driving motor
- High-voltage battery
- Generator
- ECU
- Diagnosis socket
- Dashboard
- Multi-functional display screen
- Start / stop engine system
- Converter

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AUTOTRONICS

ACCESSORIES

Suggested instruments for best practice:

- Digital Multimeter (not included)
- Automotive Oscilloscope (not included)
- OBD Fault diagnosis Scanner (not included)

- High-voltage cable
- P gear switch / Intelligent key /EV mode switch
- Electronic transmission bridge
- Braking system
- Fuel pressure meter
- Vacuum pressure meter
- Fuel tank and fuel pump
- Throttle controller
- Inlet and exhaust pipes (including protection covers)
- Water tank (including the stainless-steel protection cover)
- Cooling fan
- Auxiliary battery
- Master power switch

OTHER CHARACTERISTICS

a) The trainer is made of advanced aluminum-plastic plate with characteristics of not less than 4mm thick. The plate is corrosion resistant, impact resistant, pollution resistant, fireproof, and moisture proof. The panel surface is processed by special craft and spraying primer. The circuit diagrams are painted with never fade colour and the boards are coated with varnish. The trainees can learn and analyse the working principle of the control system by looking and analysing the diagram and the real-life components. Pivoting wheels are mounted.

b) The training bench is installed with dashboard and multi-functional display to illustrate parameters changes in the power transmission process, speed, fuel pressure light and electronic control system failure indicating light.

c) The training panel has installed detection terminals to identify various detectors, actuators, engine control unit, automatic transmission, hybrid power unit and power control unit pins' electrical signals, such as resistance, voltage, current or frequency.

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d) The training panel has installed a diagnosis socket to which an automobile decoder can be connected to read and clear fault codes, and reads data stream from the engine, automatic transmission, hybrid power and power electronically controlled systems.

e) A throttle controller is installed on the bench to accelerate and slowdown. A master power switch, a water tank shield, flywheel shield and other protection devices are installed on the training bench to keep students safe during the testing process.

f) Equipped with intelligent fault setting system, include fault setting and troubleshooting.