



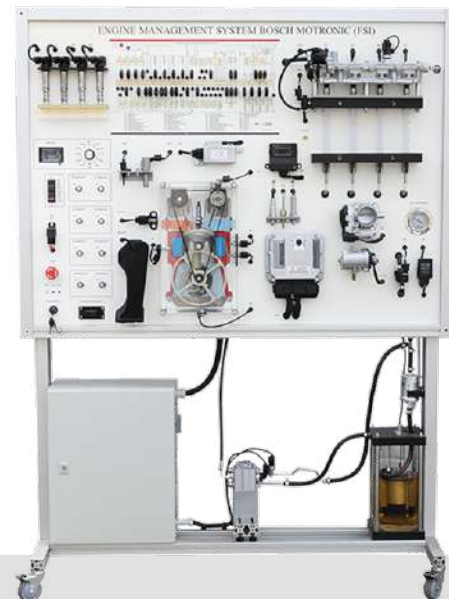
ENGINE MANAGEMENT SYSTEM BOSCH MOTRONIC (FSI)

A1

Product number
MSFSI02

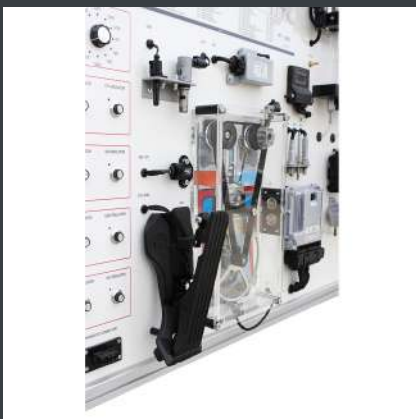


Training stand of Engine Management System Bosch Motronic (FSI) MSFSI02 offers a hands-on learning experience about modern car, demonstrating the workings of a direct petrol (gasoline) injection system. This specialized device includes all the engine management components as in the real car, such as fuel supply, exhaust and ignition systems, helping users understand how these parts interact.



Features

- High and low-pressure fuel supply systems with visible low-pressure pump operation.
- Complete electrical wiring diagram for system analysis and troubleshooting.
- Real-time monitoring and measurement of over 20 electrical parameters via banana plug connectors.
- Manual adjustment of key parameters: crankshaft speed, coolant temperature, lambda sensor output, NOx sensor output (if present), intake manifold pressure, and exhaust gas temperature.
- OBD II 16-pin diagnostic connector: supports ECU identification, live data reading, fault code management, actuator testing, throttle adaptation, and control unit encoding/configuration.
- Simulation of sensor signals (lambda, NOx, exhaust gas temperature, intake pressure) and manual fault simulation via disconnection of circuit jumpers.
- Displays voltages from critical engine sensors and actuators (accelerator pedal, throttle position, EGR, intake manifold flap, fuel pressure, temperature sensors).
- Synchronization analysis between crankshaft and camshaft.
- Optional electric vacuum pump for intake manifold control.





Value for Students

- Understand direct petrol injection systems between fuel supply, exhaust and ignition systems using OEM components.
- Study electrical circuits of electrical components for direct petrol injection system engines.
- Learn high and low-pressure fuel supply systems, injected fuel quantity, spray pattern quality.
- Understand the operation and troubleshooting of modern ignition systems.
- Understand the synchronization between crankshaft and camshaft in engine operation.
- Uses banana plug connectors to monitor and measure electrical parameters in real-time with an oscilloscope, multimeter, scan tool, or display readings on the TFT voltmeter installed on the stand panel.
- Simulate and diagnosing more than 20 system circuit faults to learn troubleshooting abilities, by disconnecting banana plug connectors.
- Simulates signals for the lambda probe, engine operating temperature, NOx sensor parameters (depending on the system), exhaust gas temperature sensor, and intake manifold pressure sensor.
- Adjust key engine parameters like crankshaft rotation frequency, sensor values, air flow rate and temperatures using potentiometers and simulators.
- Read and interpret voltage signals from various engine sensors and measure the high-voltage circuit of the ignition system. Includes a complete wiring diagram of the direct petrol injection system (FSI).
- OBD II 16 – pin diagnostic connectors for ECU identification, fault code management, real-time parameter monitoring, throttle calibration and more.



Value for Instructors

- Space-saving and mobile design with a durable, lightweight aluminum frame for efficient classroom use and long-lasting safety.
- Closed panels and internal wiring ensure safety and protect sensitive parts from accidental damage.
- Utilizes OEM components for realistic, safe, and effective training that closely resembles 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 Audi/VW OEM-based system allows diagnostics using almost any multibrand, specialized or OEM scan tools.
- Requires small adjustments to reset to default parameters, making it easy to prepare and start each lesson.

Specifications

- Dimensions: 1820 x 1360 x 500 mm (71.65 in x 53.54 in x 19.69 in)
- Weight: approx. 105 kg (230 lb)
- Power supply: ~230 V/110V (US version)
- Product number: MSFSI02

