



AutoEDU 2026 Catalog

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ABOUT US

AutoEDU started as a specialized center focused on vehicle diagnostics, and over the years, we have proudly evolved into a leading producer of high-quality automotive training equipment. Since 2003, our commitment to excellence has allowed us to export our products to numerous countries worldwide, supporting automotive education on a global scale. We take pride in crafting advanced, sustainable tools that not only provide hands-on learning experiences but also contribute to an eco-friendly future by incorporating recycled vehicle components into our designs.



Our commitment to practical and sustainable education is evident in the design of our training equipment. AutoEDU products, including cutaway models and detailed training stands, use real automotive components to provide a genuine learning experience. These tools support both traditional and modern teaching methods by incorporating advanced diagnostic and measurement techniques. Furthermore, our use of recycled vehicle parts highlights our dedication to environmental stewardship, transforming obsolete vehicles into valuable educational resources.

This approach enhances the practical value of our training tools while aligning with our goal of promoting an eco-friendly educational environment, thereby preparing students effectively for their future careers.



Our extensive product range includes over 400 items designed to elevate automotive education. We offer a variety of training aids, such as functional models and simulators based on real OEM components, which ensure a realistic and immersive learning experience. These tools are distinguished by their practicality and safety features, as well as their integration of actual automotive components, making them essential for effective teaching and learning. The equipment's design mirrors real-world automotive systems, guaranteeing that the training is both relevant and up-to-date.



HYBRID PETROL(GASOLINE)/ ELECTRIC TRAINERS





ELECTRIC VEHICLE EDUCATIONAL TRAINING STAND

**L3****Product number**
MSEV02

Fully functional electric vehicle training stand is based on the Nissan Leaf electric car, offering a practical and theoretical training experience using real electric vehicle components. This educational stand includes the main systems of electric vehicles, such as the electric motor, inverter, high-voltage battery, high-voltage cables, charging port and other essential elements. All components are connected with original high-voltage "orange" cables and covered with protective plexiglass for safety.



Features

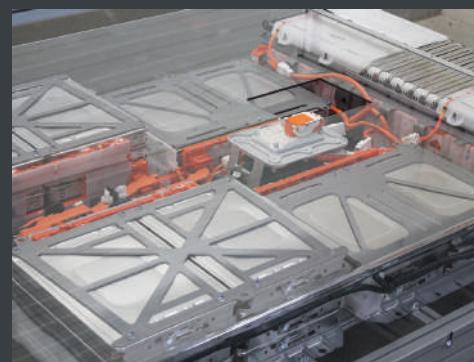
- Integrated real electric car motor.
- Genuine electric inverter for accurate system management.
- Real high-voltage battery, including a high-voltage disconnect plug/fuse for safety.
- Functional electric AC compressor to understand climate control in EVs.
- Genuine "orange" high-voltage cables with connectors and safety features to prevent electrical hazards during training.
- Diagnosis through OBD 16-pole diagnostic socket for ECU operations.
- Includes a principal electric wiring diagram of the electric car for reading and understanding electrical diagrams, component markings, and using this knowledge for troubleshooting and repairing modern electric vehicles.
- Equipped with open contacts for real-time measuring of electrical parameters.
- Allows simulation of up to 10 faults on the EV control system (not the high voltage).
- Includes prepared procedures and instructional manuals with images.
- Durable and mobile, designed for efficient classroom or lab use.

Value for Students

- Provides easy, safe, and comfortable training that builds confidence, using OEM components to offer a realistic electric car repair experience.
- Offers practical experience with electric car systems, including the integrated electric motor, inverter, real high-voltage battery, connections, and cables.
- Enables students to study and analyze the electrical circuits of electric car systems, learning about wiring diagrams and related components such as the battery and high-voltage source disconnection plug/fuse, before starting repair or maintenance procedures.
- Integrated principal electric diagram with a measuring box allows students to measure the voltage and electric circuits of each engine component.
- Simulates various faults for diagnostic training, enhancing troubleshooting skills.
- Includes a comprehensive wiring diagram with sensors, actuators, data transmission lines, and diagnostic connections, illustrating component connections and contact numbers.
- OBD II 16-pin diagnostic connectors for ECU identification, reading/erasing fault codes, and live data parameter monitoring.

Specifications

- Dimensions: 2505 x 1055 x 1605 mm (98.62in x 41.53in x 63.18in)
- Weight: approx. 700 kg (1543 lb)
- Power Supply: 12V battery, High-voltage battery (~400V) 24 kWh, 230V 50 Hz household electricity network
- Power: 80 kW (109 HP), 280 Nm
- Product Number: MSEV02

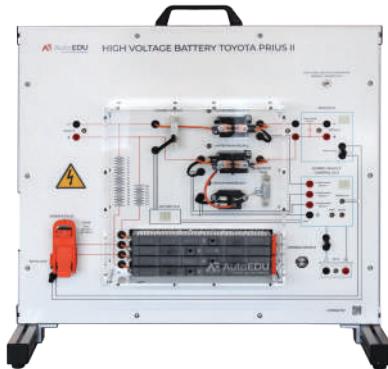




HIGH VOLTAGE BATTERY SYSTEM EDUCATIONAL TRAINER

**L3****Product number****HYBBAT02**

The High Voltage Battery Training System is a compact, interactive training unit designed for teaching high-voltage battery management and diagnostics, using components from the Toyota Prius II OEM model. It enables students to connect and disconnect service plugs, measure battery voltage, and understand power transfer from the battery to the inverter. Equipped with a detailed wiring diagram and the ability to measure each battery cell separately, this trainer replicates real-world electric car conditions. The system includes LED indicators for monitoring relay and inverter status and offers a slowed start-up mode to facilitate step-by-step analysis of the activation sequence. All high-voltage components are safely enclosed under plexiglass for enhanced safety during hands-on training.



Features

- Real DC 201.6V with four high-voltage battery cells and individual measurement points.
- Safe voltage measurement points for battery (left) and inverter (right).
- Divided battery sections for separate 1/2 and 2/2 voltage measurements.
- Service plug with interlock, OEM removal procedure, and fuse check.
- Sequential activation of high-voltage relays, including soft-start relay.
- Power transfer analysis and relay control signal measurement.
- OEM wiring diagram with high-voltage markings and LED indicators.
- 10x slow-motion startup sequence for detailed system analysis.
- Plexiglass enclosure for safety with full component visibility.
- Lightweight, portable design for classroom use.
- Powered by 220V (110V US), 12V battery, or DC 12V.

Value for Students

- Hands-on experience with high-voltage battery operations, service plug, interlock connection, and safety protocols.
- Analyze and measure battery voltage with or without the service plug.
- Measure voltage distribution in battery sections (1/2 and 2/2) and individual cells.
- Examine power transfer steps from battery to inverter, including ignition and switch activation.
- Learn high-voltage relay activation, including 10x slow-motion analysis.
- Observe inverter cover lifting interlock operation.
- Measure relay control signals and polarity.
- Understand electrical mass disable procedures, including system shutdown and service plug removal.

Specifications

- Dimensions: 560 x 715 x 60 mm (22 in x 28.14 in x 2.36 in).
- Power supply: 230 V/110 V (US version), 12V battery, DC 12V power source.
- Product number: HYBBAT02.



**Watch the video
to see it in action**





HIGH VOLTAGE BATTERY EDUCATIONAL TRAINER ON A TROLLEY

L3

Product number

HYBBAT01-TR



High Voltage Battery on a trolley provides a detailed understanding of the construction and operation of hybrid and electric vehicle high-voltage batteries.

This advanced training stand incorporates OEM car parts, including battery cells, controllers, and control units, wiring making it ideal for technical and vocational automotive education.



Features

- Incorporates OEM components including battery cells, controllers, and control units.
- Clear arrangement of components for easy understanding of high-voltage battery construction and operation.
- Includes a high-voltage disconnect fuse and service plug for safe demonstration and maintenance procedures.
- OBD 16-pin diagnostic connector for comprehensive ECU diagnostics.
- Switches for simulating various faults in the battery system to enhance diagnostic training.
- Monitors and controls battery charge levels, temperature, and current leakage.

Value for Students

- Easy, safe, and comfortable training stand, build using OEM components for detailed learning of electric car high-voltage 201.6V Ni Mh battery maintenance and repair.
- Detailed study and analysis of high-voltage battery electrical circuits, wiring diagrams, and components. Learn and understand about the wiring diagrams and presented components on it. High-voltage disconnect fuse is easily accessible.
- Clearly visible device structure, arrangement of components, controllers, control units, 201.6V Ni Mh battery blocks/cells, and other elements
- Develops troubleshooting skills through simulated faults, enhancing problem-solving abilities. Includes simulation switches: F1 (cooling fan circuit), F2 (temperature sensor circuit), F3 (battery pack ground connection). OBD 16-pin diagnostic connector for ECU diagnostics.
- Learn about battery management systems, including SOC control, cooling system temperature monitoring, and current leakage detection.



Specifications

- Dimensions: 960 x 455 x 255 mm (37.80 in x 17.91 in x 10.04 in)
- Weight: 49 kg (108 lb)
- Power supply: 230 V (110 V)
- Battery type: Ni-MH battery pack with 168 cells (1.2 V each), nominal voltage 201.6 V
- Battery control features: current sensor, system main relay (SMR), battery ECU for monitoring and control
- Made in the EU
- Product number: HYBBAT01-TR

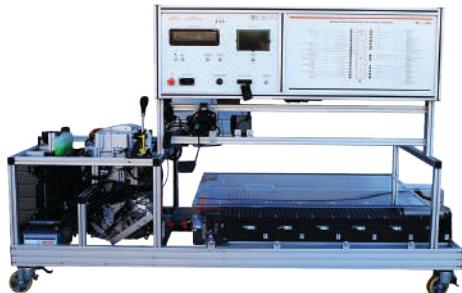




ELECTRIC VEHICLE EDUCATIONAL TRAINING STAND

**L3****Product number**
MSEV03

Electric vehicle training stand is based on the Renault ZOE electric car, offering a comprehensive hands-on and theoretical training experience using real electric vehicle components. Designed for automotive students, this educational stand includes the main systems of electric vehicles, such as the electric motor, inverter, high-voltage battery, and charging port. All components are connected with original high-voltage "orange" cables and covered with protective plexiglass for safety.



Features

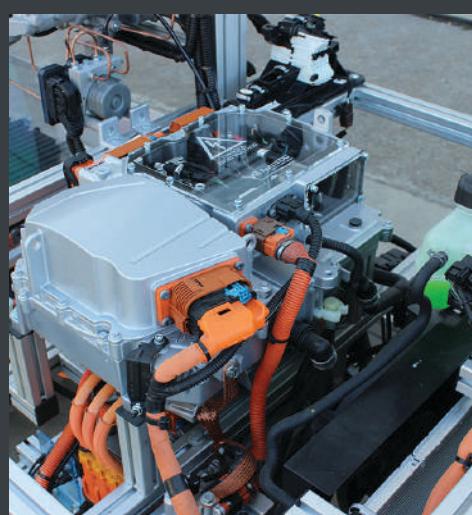
- Integrated OEM EV motor enables practical operation and system training.
- Original electric inverter ensures authentic control of power electronics.
- High-voltage battery unit includes OEM service plug for safe maintenance procedures.
- Genuine orange high-voltage cables with OEM connectors, protected under safetyglass for training safety.
- 16-pin OBD socket supports ECU diagnostics and parameter access.
- Electrical wiring diagram displays ECU connections for training and troubleshooting.
- BOB interface provides open test points for live voltage, current, and signal measurement.
- Fault simulation system allows activation of up to 10 faults in low-voltage EV control circuits.
- Sturdy aluminum frame with industrial castors ensures mobility and durability for classroom use.

Value for Students

- Provides easy, safe, and comfortable training that builds confidence, using OEM components to offer a realistic electric car repair experience.
- Offers practical experience with electric car systems including the integrated electric motor, inverter, real high-voltage battery, connections, and cables.
- Enables students to study and analyze the electrical circuits of electric car systems, learning about wiring diagrams and related components such as the battery and high-voltage source service plug, before starting repair or maintenance procedures.
- Simulates various faults for diagnostic training, enhancing troubleshooting skills.
- Includes a wiring diagram of electric car ECU.
- Utilizes OBD II 16-pin diagnostic connectors for ECU identification, reading/erasing fault codes, and live data parameter monitoring.

Specifications

- Power Supply: Autonomic
- Battery: 12V battery
- Dimensions: [dimensions not provided]
- Net Weight: [weight not provided]
- Product Number: MSEV03





TOYOTA PRIUS IV HYBRID PLUG-IN FUNCTIONAL EDUCATIONAL TRAINER

L3

Product number

AHPLIN04



Fully functional educational trainer, based on the Toyota Prius IV hybrid plug-in, provides a learning experience of a fully operational Plug-in Hybrid Electric Vehicle (PHEV). This immersive training platform is designed for diagnosing and understanding complex hybrid systems. It is equipped with built-in measuring boxes, fault code simulation for multiple systems, and open contact wiring diagrams, enhancing technical and vocational automotive education and training.



Features

- Includes all key components of a Toyota Prius IV, providing a complete and operational hybrid system for training.
- Offers training on the PHEV version, allowing students to understand both conventional hybrid and plug-in technologies.
- Integrated measuring boxes with open contacts and wiring diagrams for detailed electrical system analysis. One systems chose from: engine system, hybrid system, brake system, climate system, SRS system. More can be added optional.
- Simulates faults in engine control, power management, and high voltage systems, offering realistic diagnostic training. One systems chose from: engine system, hybrid system, brake system, climate system, SRS system. More can be added optional.
- Supports engine, ABS, AC, and airbag diagnostics, providing a broad scope of training opportunities.

Value for Students

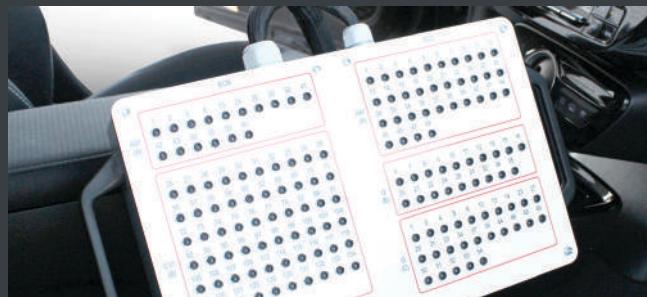
- Provides easy, safe, and comfortable training that builds confidence, using OEM components to offer a realistic car repair experience.
- Gain hands-on experience with a fully operational hybrid plug-in vehicle system, to understand the complexities of modern hybrid technology.
- Learn to diagnose and troubleshoot hybrid vehicle systems, including engine, ABS, AC, airbags, and more with various diagnostic tools.
- Study and analyze the electrical circuits of hybrid systems with built-in measuring boxes and open contact wiring diagrams.
- Develop troubleshooting skills by simulating and diagnosing faults in multiple electronic systems.
- Perform various laboratory tasks and measurements, gaining in-depth knowledge of system parameters and their impact on vehicle performance.

Specifications

- Dimensions: 4480 x 1745 x 1490 mm (176.38 in x 68.70 in x 58.66 in)
- Weight: 1420 kg (3130 lb)
- Power Supply: 12 V battery
- High Voltage Battery: 21.5 Ah, 207 V
- Fuel Type: Gasoline A91 or higher
- Safety Equipment: Protective Tools Set EHVS01 (optional)



Watch the video
to see it in action





TOYOTA PRIUS III HYBRID PLUG-IN FUNCTIONAL EDUCATIONAL TRAINER

L3

Product number

AHPLIN03



The AHPLIN03 function trainer, based on the Toyota Prius III hybrid plug-in, provides a learning experience of fully operational Plug-in Hybrid Electric Vehicle. This is an immersive training platform for diagnosing and understanding complex hybrid systems. Equipped with built-in measuring boxes, fault code simulation for multiple systems, and open contact wiring diagrams, this training equipment is designed to enhance technical and vocational automotive education and training.



Features

- Includes full Toyota Prius III hybrid system with OEM components.
- Supports PHEV training with focus on hybrid and plug-in operation.
- Measuring box with open contacts and wiring diagram for one system; expandable.
- Simulates faults in engine, ABS, SRS, HVAC, and HV circuits; one system included, others optional.
- Compatible with diagnostics for engine, ABS, AC, and airbag modules.

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 fully operational hybrid, Plug-in (PHEV) version, vehicle system, to understand the complexities of modern hybrid technology.
- Learn to diagnose and troubleshoot hybrid vehicle systems, including engine, ABS, AC, airbags and more with various diagnostic tools.
- Study and analyze the electrical circuits of hybrid systems with built-in measuring boxes and open contact wiring diagrams.
- Develop troubleshooting skills by simulating and diagnosing faults in multiple electronic systems.
- Perform various laboratory tasks and measurements, gaining in-depth knowledge of system parameters and their impact on vehicle performance.



Specifications

- Dimensions: 4480 x 1745 x 1490 mm (176.38 in x 68.70 in x 58.66 in)
- Weight: 1420 kg (3130 lb)
- Power Supply: 12 V battery
- High Voltage Battery: 21.5 Ah, 207 V
- Fuel Type: Gasoline A91 or higher
- Safety Equipment: Protective Tools Set EHVS01 (optional)





ELECTRICAL VEHICLE FUNCTIONAL EDUCATIONAL TRAINER

L3

Product number

AE02



Fully operational electric vehicle based on the Nissan Leaf II shows real vehicle components and diagnostic capabilities for systems such as the electric motor, high-voltage battery, ABS, AC, airbags, brakes, suspension and more, providing knowledge of modern electric vehicle systems.



Features

- Includes two diagnostic boxes: EV system, ABS, AC or airbags. More can be added additionally.
- Open contacts and wiring diagrams for two electronic systems facilitate detailed study and analysis.
- Enables simulation of 10 faults in the Vehicle Control Module and 10 faults in the Air Conditioning Control Module.
- Remotely introduce faults using a computer, tablet, or smartphone for efficient fault diagnosis training.
- Positioned in the car cabin, it can be moved as needed, ensuring safety and convenience during training sessions.
- Displays sensors, actuators, data transmission lines, and diagnostic connections for comprehensive system understanding.
- The fault simulation equipment is automatically activated and deactivated with the car, ensuring a safe training environment.

Value for Students

- Provides easy, safe, and comfortable training that builds confidence, using OEM components to offer a realistic car repair experience.
- Study and simulate electrical circuits of EV systems, climate control, airbag system, braking system with built-in measuring boxes and wiring diagrams. Two boxes are included, more diagnostic boxes can be added additionally.
- Develop diagnostic skills through built-in fault code simulations system of EV systems, climate control, airbag system, braking system.
- OBD II 16 - pin diagnostic connectors for ECU identification, fault code management, real-time parameter monitoring, throttle calibration and more.
- Simulating real vehicle pneumatic components, exact number of components are in training aid.

Specifications

- Dimensions: 4479 x 1790 x 1535 mm (176.26 in x 70.47 in x 60.43 in)
- Weight: approx. 1640 kg (3615 lb)
- Power supply: 12 V battery
- High voltage battery: 400 V
- Safety requirement: EHVS01 protective tools set (optional)
- Product number: AE02





EDUCATIONAL HYBRID ENGINE TRAINER



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.



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

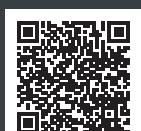
- Provides easy, safe, and comfortable training that builds confidence, using OEM components to offer a realistic car repair experience.
- Gain hands-on experience with a functional gasoline/electric hybrid engine stand, understand gasoline/electric TOYOTA HYBRID CONTROL SYSTEM – II (THS-II).
- Learn 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.

Specifications

- Dimensions: 1750 x 1450 x 1200 mm
- Weight: 470 kg (1036 lb)
- Power supply: 230 V/110 V (US version)
- Made in EU
- Product number: MVHY01



Watch the video
to see it in action





TOYOTA PRIUS III PETROL (GASOLINE)/ELECTRIC/LPG HYBRID 3/4 EDUCATIONAL TRAINER

L3

Product number

PMTPK05



Fully functional hybrid car training model, mounted on a mobile chassis, integrates all hybrid car systems. Presenting hybrid systems, LPG supply, body, and chassis structures, as well as passive and active safety systems.



Features

- Based on the Toyota Prius III with a hybrid system and LPG supply system.
- Open sections of roof, fender, door trim, high voltage battery, LPG system for clear visibility and safe learning.
- Integrated LPG system with gas equipment and safety elements with visible pressure gauge, gas filling and supply lines, safety valve.
- Complete climate control system.
- ABS, stability control, and SRS airbag systems with exposed components for training.
- CAN Bus Network. Facilitates understanding of data communication within the vehicle.
- Safe access to high-voltage battery, fuses, inverter, vires with plexiglass covers for safe educational purposes.
- OBD 16-pin diagnostic connector for ECU identification, fault code management, and live data display.

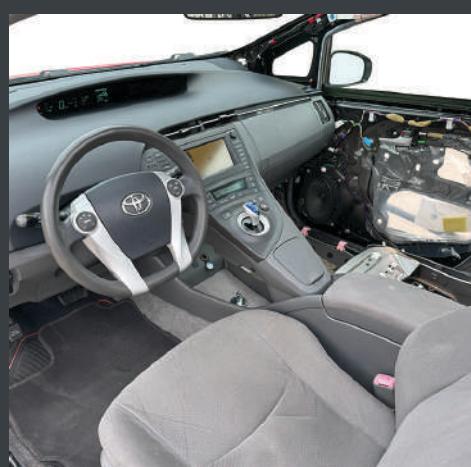
Value for Students

- High-voltage battery and inverter covered with safety glass for safe access. Visible high-voltage wiring, safety fuse, and diagnostic points.
- OEM hybrid system with LPG supply. Features exposed body and chassis structures, including roof, fender, and interior door trim. Passive and active safety systems visible and sectioned for study.
- Supports hybrid mode diagnostics, real-time parameter monitoring, and system measurements using OBD, oscilloscope, gas analyzer, exhaust extraction, and A/C service tools.
- LPG system includes filling valve with adapter, cylinder in spare wheel space, visible pressure gauge, supply lines, and safety valve.
- ABS, stability control, and airbag systems exposed for functional understanding. OBD 16-pin diagnostics enable fault code reading, actuator testing, and control unit configuration.



Specifications

- Dimensions: 4460 x 1745 x 1510 mm (175.59 in x 68.70 in x 59.45 in)
- Weight: approx. 1805 kg
- Power supply: 12V battery, high-voltage battery pack (~200V), gasoline A91 or higher
- Safety equipment: protective tools set EHVS01
- Product number: PMTPK05





EV VEHICLE ELECTRIC MOTOR EDUCATIONAL TRAINER

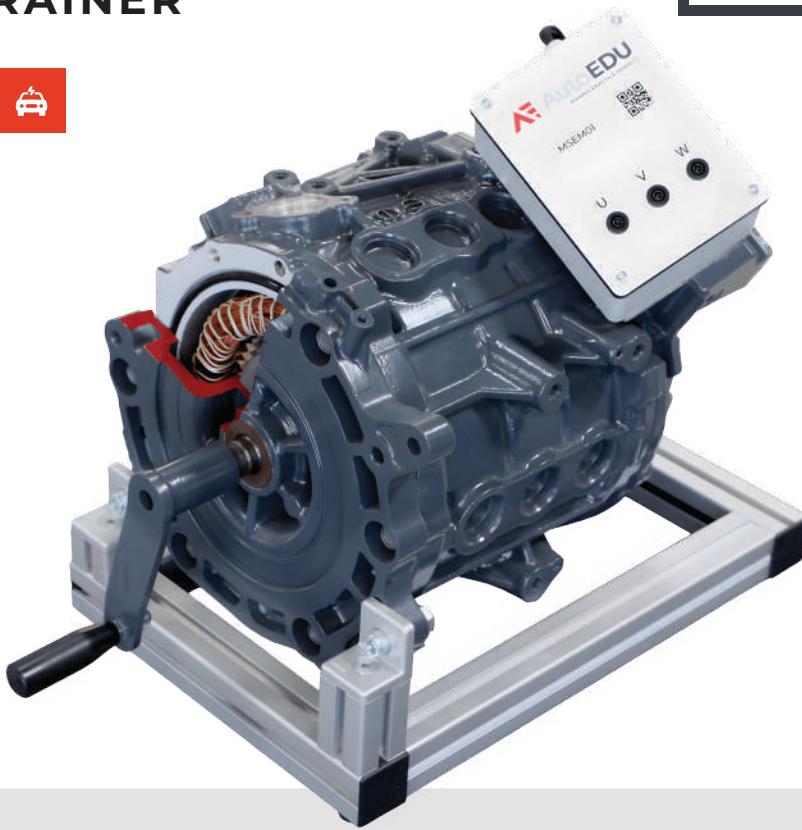


L3

Product number
MSEM01

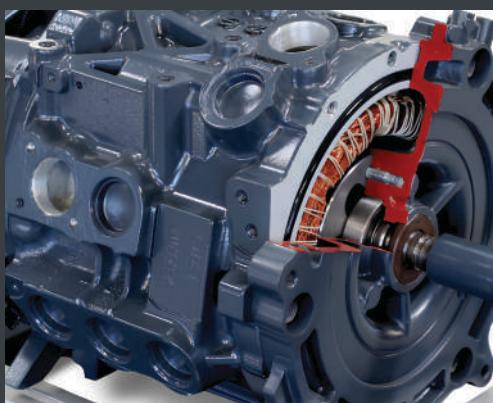


Manually operated educational trainer designed to demonstrate the principles of three-phase electric power generation. Built using an original electric motor from a Nissan Leaf EV, this unit allows students to simulate real-world electromagnetic induction by manually rotating the rotor. It combines mechanical interaction, waveform analysis, and clear structural visibility for comprehensive electric drive system training.



Features

- Manual crank for simulating rotor rotation and power generation.
- Integrated LED strip indicating power output through brightness and color change.
- Three-phase output terminals (U, V, W) for oscilloscope connection and waveform analysis.
- Cross-section view of rotor, stator, windings, and shaft components.
- Transparent protective cover over high-voltage terminals and connections.
- Industrial-grade aluminum frame for stability and classroom durability.



**Watch the video
to see it in action**



Specifications

- Motor Type: Nissan Leaf EV permanent magnet synchronous motor (PMSM).
- Simulation Type: Manual rotation with mechanical crank.
- Voltage Output: Low-voltage three-phase AC (non-powered, safe manual simulation).
- Terminals: U, V, W – 4mm safety socket type for measurement.
- Measurement Support: Compatible with oscilloscopes and multimeters.
- LED Indicator: Color-changing linear strip (visualizes relative power level).
- Safety: Transparent polycarbonate cover for high-voltage terminal protection.
- Frame: Aluminum profile with rubber feet for lab stability.
- Dimensions (approx.): 700 x 500 x 450 mm.
- Weight (approx.): 25 kg.
- Product number: MSEM01



HYBRID PETROL /ELECTRIC SYSTEM CUTAWAY



L3

Product number

AE34502WM



This Hybrid System Petrol-Electric Cutaway Trainer is a complete educational solution for studying the design and operation of modern hybrid vehicle systems. The trainer includes cutaway views of the petrol engine, hybrid transmission, inverter, and high-voltage battery, combined with an interactive board that illustrates energy flow in five different drive modes. Electrically powered, the system simulates engine and transmission movement, giving students a realistic demonstration of hybrid operation in action.

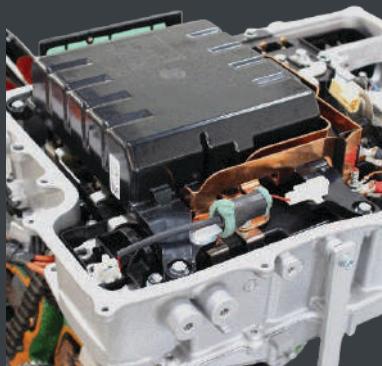


Features

- Cutaway petrol engine and hybrid transmission with visible planetary gear unit.
- Cutaway EV inverter showing power electronics and internal structure.
- Cutaway high-voltage EV battery with visible modules and connections.
- Electrically driven to simulate engine and hybrid transmission operation.
- Interactive informational board with 5 operating modes showing energy flow.
- Illustrated hybrid system scheme with labeled components and layout.
- Visualization of motor generators (MG1 and MG2) and power split device.
- Safety features integrated for classroom use.
- Strong mobile frame with wheels for easy movement.

Value for Students

- Learn the structure and function of hybrid drive systems.
- Understand how energy flows between petrol engine, inverter, battery, motors, and wheels.
- Observe hybrid transmission operation with planetary gear set and motor generators.
- Study internal construction of EV inverter and high-voltage battery.
- Analyze real-time simulation of 5 hybrid drive modes.
- Explore regenerative braking and energy recovery concepts.
- Gain insight into integration of mechanical and electrical systems in modern hybrids.



Specifications

- Petrol engine cutaway.
- Hybrid transmission cutaway with planetary gear system.
- EV inverter cutaway section with power module visibility.
- High-voltage EV battery cutaway with module detail.
- Interactive hybrid energy flow board with 5 operating modes:
 1. Continuous Engine Operation with Battery Charging.
 2. Combined Drive Mode.
 3. Engine Drive with Battery Charging.
 4. Electric-Only Drive Mode.
 5. Regenerative Braking Mode.
- Component list and hybrid system layout diagram.
- Electrically driven for motion simulation.
- Dimensions: approx. 1700 x 1200 x 1700 mm (67 x 47 x 67 in).
- Weight: approx. 250 kg (551 lbs).



TOYOTA PRIUS III HYBRID ½ EDUCATIONAL TRAINER

L3**Product number**
PMTPO3

Advanced learning platform for understanding hybrid vehicle technologies. This functional model replicates the essential components and systems of a Toyota Prius III hybrid vehicle, including the petrol (gasoline)/electric control system, automatic gearbox, and various diagnostic features. Engineered for educational settings, it combines a space-saving design with comprehensive diagnostic and measurement capabilities to enhance automotive training.

Features

- Contains Toyota THS-II hybrid control system, automatic transmission, and HVAC unit.
- High-voltage battery setup with service plug and HV wiring is clearly visible.
- OBD II 16-pin connector enables ECU ID, DTC management, live data, and actuator tests.
- Fault simulation for engine, HVAC, and SRS systems.
- Optional measuring boxes with wiring diagrams and test points for detailed circuit analysis.
- Integrated CAN Gateway for hybrid network communication training.



TOYOTA PRIUS II HYBRID ½ EDUCATIONAL TRAINER

L3**Product number**
PMTPO1

The Toyota Hybrid Educational Trainer PMTP01 provides an advanced, hands-on learning platform for understanding hybrid vehicle technologies. This functional model replicates the essential components and systems of a Toyota Prius II hybrid vehicle, including the petrol(gasoline)/electric control system, automatic gearbox, and various diagnostic features. Engineered for educational settings, it combines a space-saving design with comprehensive diagnostic and measurement capabilities to enhance automotive training.

Features



- Includes Toyota's petrol(gasoline)/electric hybrid control system (THS-II), automatic gearbox, and climate control system.
- Features OBD II 16-pin diagnostic connector for ECU identification, fault code reading/erasing, live data display, and actuator testing.
- Simulates faults in the engine control system, climate control, and SRS airbag system.
- Equipped with built-in measuring boxes for engine control, climate control, and SRS airbag systems, each with wiring diagrams and open contacts for comprehensive analysis.
- Includes a CAN Gateway network for studying data communication within the hybrid vehicle system.



TOYOTA PRIUS III PLUG-IN HYBRID 3/4 EDUCATIONAL TRAINER

**L3****Product number****PMTPK05-PLUG**

Fully functional educational trainer based on Toyota Prius III Plug-in Hybrid. Mounted on a mobile chassis, it includes the high-voltage battery, inverter, MG1/MG2 motors, internal combustion engine, plug-in charging system, safety systems, and CAN network. Equipped with diagnostic access, exposed sections, and safety covers for detailed study of hybrid operation and service procedures.

Features

- OEM Toyota Prius III plug-in hybrid powertrain with ICE, MG1, MG2, HV battery, and inverter.
- Fully functional plug-in charging port.
- Power Control Unit with inverter and DC/DC converter.
- High-voltage components protected by plexiglass covers.
- OBD 16-pin diagnostic port for live data and fault codes.
- Exposed sections: roof, fender, door trim, HV battery, and inverter.
- Functional CAN bus communication across all ECUs.
- ABS, ESC, and SRS airbag systems with visible components.
- Full automatic climate control system with service access.



HYBRID PLUG-IN FUNCTIONAL EDUCATIONAL TRAINER

L3**Product number****AHPLIN01**

Advanced hybrid vehicle training system based on the FORD C-Max. This fully operational hybrid system, featuring a Plug-in Hybrid Electric Vehicle (PHEV) version, is designed for learning and analyzing various car systems work processes, perform various measurements of system parameters, conduct fault simulations and diagnose issues.

Features

- Hybrid system simulating real FORD C-Max PHEV operation.
- Supports diagnostics for engine, ABS, AC, and airbag systems.
- Built-in measuring box with open contacts and wiring diagrams.
- Fault simulations for PCM, HVAC, and SOBDMC modules.
- Wi-Fi controlled faults via PC, tablet, or smartphone.
- Includes EHVS01 protective tool set for safety.
- Detailed wiring diagrams for sensors, actuators, and data lines.





HIGH VOLTAGE SOURCE SAFE DISCONNECTION EDUCATIONAL TRAINER

**L3****Product number****MSAE1021**

The stand is designed for safety training with hybrid cars. It facilitates high voltage plug/fuse disconnection of hybrid cars before starting repair or maintenance procedures. It is also used to explain safety procedures when working with hybrid cars. Ideal for technical and vocational automotive educational training

Features

- Designed for safe hybrid vehicle maintenance training. Includes high-voltage fuse disconnection system and service plug handling procedures.
- All components are mounted on an accessible training panel. Shows correct 12V power connection and battery status.
- Provides details on high-voltage battery configuration, activation, deactivation, and charging conditions.
- Supports safe installation/removal of fuses and plugs. Allows connection of 12V power supply or battery for equipment operation.



HIGH VOLTAGE SOURCE SAFE DISCONNECTION EDUCATIONAL TRAINER

L3**Product number****MSAE1020**

The stand is designed for safety training with hybrid cars. It facilitates high voltage plug/fuse disconnection of hybrid cars before starting repair or maintenance procedures. It is also used to explain safety procedures when working with hybrid cars. Ideal for technical and vocational automotive educational training.



Features

- Specialized trainer for safe hybrid vehicle servicing. Includes high-voltage fuse and service plug disconnection procedures.
- All components are panel-mounted for easy access and demonstration. Indicates correct 12V DC power connection.
- Covers high-voltage battery layout, activation, deactivation, and charging control. Supports safe fuse and plug handling. Operates via external 12V power supply or battery.



EDUCATIONAL ELECTRIC VEHICLE TRAINING STAND

L3**Product number**
MSEV01

High-voltage training stand with electric motor, controller, battery, and air conditioner compressor connected by high voltage cables. OBD 16-pole for diagnostic.



TOYOTA PRIUS II HYBRID 1/2 EDUCATIONAL TRAINER

L3**Product number**
PMTPK01

Fully functional Toyota Hybrid Control System II with engine, ABS, AC, and SRS airbag diagnostics, mounted on a compact frame with front wheels and rear rollers. It supports OBD 16-pin diagnostics, ECU identification and fault simulation.



TOYOTA PRIUS III PLUG-IN HYBRID 1/2 EDUCATIONAL TRAINER

L3**Product number**
PMTP03-PLUG

Fully operational vehicle, space-saving alternative with a complete front end, rear electrical components, and diagnostic capabilities for the engine, hybrid system, ABS, AC, and airbags.



HIGH VOLTAGE BATTERY DISASSEMBLY AND ASSEMBLY

L3**Product number**
VIVV01-HYBBAT

High-voltage battery pack adapted for safe educational use. Contains 28 Ni-MH modules, current sensor, main relays, and battery ECU for realistic control simulations. Fully de-energized for safe operation, with visible wiring and service plug for detailed study of battery management systems.



HYBRID PLUG-IN EDUCATIONAL TRAINER

L3**Product number**
AHPLINK01

Educational training vehicle based on a fully functional FORD C-MAX Plug-in Hybrid (PHEV) system. Includes original internal combustion engine and electric drivetrain components.



HYBRID PLUG-IN FUNCTIONAL EDUCATIONAL TRAINER

L3**Product number**
AE01

Fully operational Nissan Leaf-based model includes diagnostics for the EV system, ABS, AC, and airbags, with built-in measuring boxes and fault code simulations.





TOYOTA PRIUS IV PLUG-IN HYBRID 1/2 EDUCATIONAL TRAINER

L3**Product number****PMTP04-PLUG**

Space-saving model, based on the Toyota Prius Plug-in (2016-), fully functional front end, rear electrical components, and supports vehicle diagnostics.



HYBRID PLUG-IN FUNCTIONAL EDUCATIONAL TRAINER

L3**Product number****AHPLIN02**

Fully functional HEV trainer for diagnostics and hybrid system learning. Features measuring boxes, fault code simulation, and open wiring diagrams for advanced technical training.



TOOLSET FOR WORKING WITH HIGH VOLTAGE VEHICLES

Product number
AEHVS01

Protective tool set for training with high voltage vehicles includes gloves, a digital voltage tester, protective glasses, fencing tape, a 3-sided warning sign, a 2-sided warning sign, and a multimeter.



TOYOTA YARIS III PETROL/ELECTRIC HYBRID EDUCATIONAL TRAINER

L3**Product number****PMTPK07**

This product overview describes a fully functional hybrid car training model based on the Toyota Yaris III. Mounted on a mobile chassis, this model integrates all crucial hybrid vehicle systems and serves as an invaluable educational tool for demonstrating hybrid technology, body structure, and safety systems.



TOYOTA YARIS HYBRID EDUCATIONAL TRAINER

L3**Product number****PMTPK08**

Functional training model based on Toyota Yaris (2020 -2023) for studying engine management, hybrid, and vehicle electronic systems. Includes diagnostic access, fault simulation, open test points, and cutaway components for clear visibility.



BUILT IN MEASURING BOX WITH OPEN CONTACTS AND WIRING DIAGRAM FOR EV SYSTEM

- For electric motor systems.
- With or without high-voltage.
- Should be ordered together with the car.
- Max 2 systems per car.



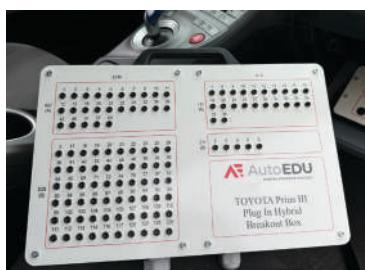
BUILT IN MEASURING BOX WITH OPEN CONTACTS AND WIRING DIAGRAM FOR CLIMATE CONTROL

- Should be ordered together with the car.
- Max 2 systems per car.



BUILT IN MEASURING BOX WITH OPEN CONTACTS AND WIRING DIAGRAM FOR BRAKING SYSTEM

- Should be ordered together with the car.
- Max 2 systems per car.



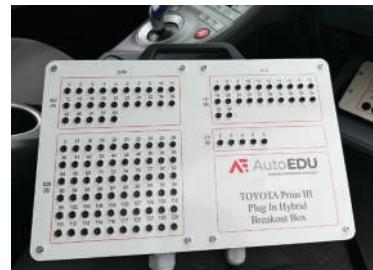
BUILT IN MEASURING BOX WITH OPEN CONTACTS AND WIRING DIAGRAM FOR ENGINE CONTROL SYSTEM

- For regular and hybrid engines.
- With or without high-voltage.
- Should be ordered together with the car.
- Max 2 systems per car.



BUILT IN MEASURING BOX WITH OPEN CONTACTS AND WIRING DIAGRAM FOR SRS AIRBAG

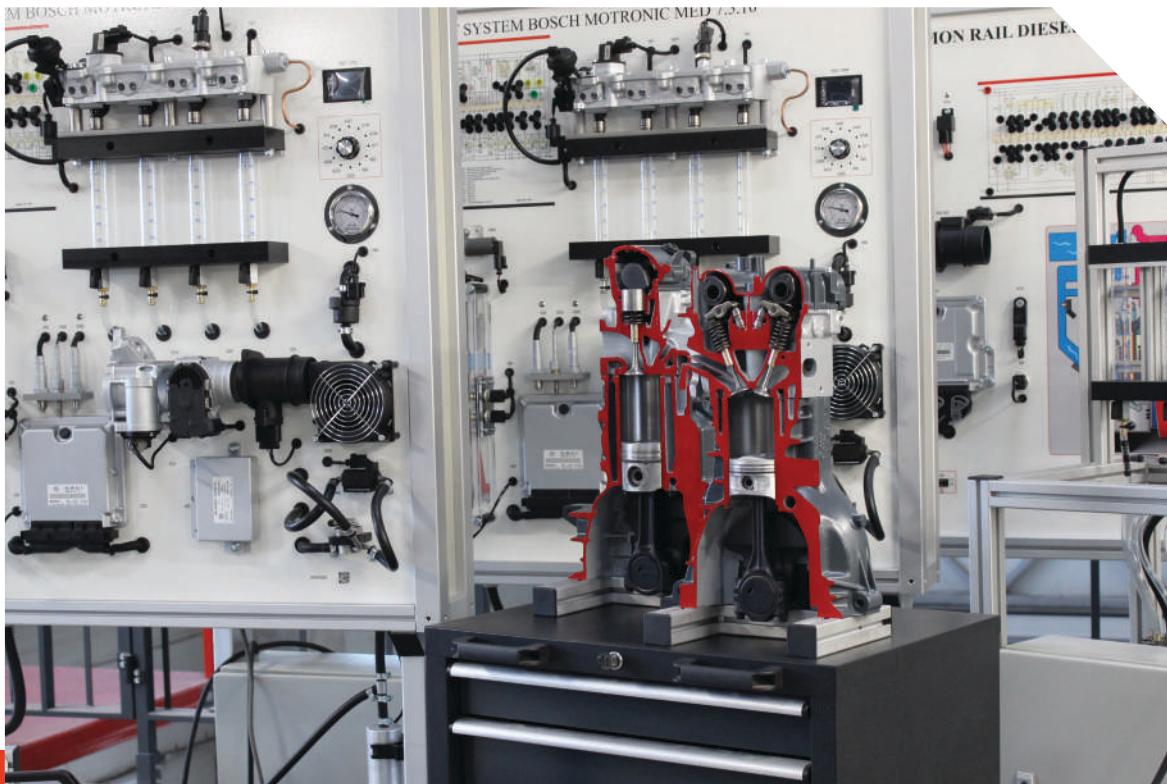
- Should be ordered together with the car.
- Max 2 systems per car.



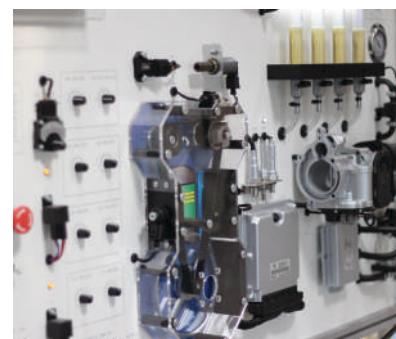
FAULT SIMULATION BOX

- Simulate faults of engine, hybrid, electric motor, SRS airbag, braking or climate control systems.
- Up to 10 faults simulation.
- Available Manual or WI-FI version.
- Max 2 systems per car.





ENGINE AND TRANSMISSION





ENGINE MANAGEMENT SYSTEM BOSCH MOTRONIC (FSI)

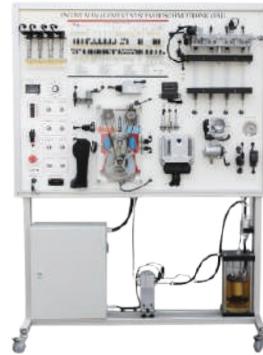


A1

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 system
- Direct petrol (FSI) injection and ignition system
- Complete electrical wiring diagram included
- Analyzes injection and ignition circuits
- Measures injector spray pattern, fuel quantity, and pressure
- Over 20 electrical parameters via banana plug connectors
- High-voltage ignition circuit diagnostics
- Crankshaft and camshaft synchronization demonstration
- Manual adjustment of crankshaft RPM, lambda, NOx, EGT, coolant temps, intake pressure/temp (system-dependent)
- Voltage monitoring of EGR potentiometer, throttle, fuel pressure, sensors (temp, pressure, etc.)
- Fault simulation by jumpers or parameter deviation
- OBD II 16-pin diagnostics: fault codes, live data, actuator tests, adaptation, ECU configuration
- Electric vacuum pump for manifold flaps (optional)

Value for Students

- Hands-on experience with real OEM systems for realistic diagnostics and repair
- Clear understanding of fuel, ignition, and electrical systems through visual and practical training
- Skill development in fault simulation, parameter adjustment, and sensor data interpretation
- Familiarity with professional diagnostic tools and OBD II systems used in modern vehicles

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



Watch the video
to see it in action





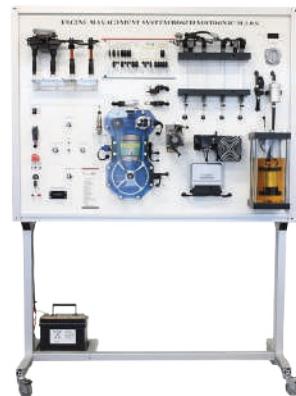
ENGINE CONTROL SYSTEM MOTRONIC M 3.8.X (MPI) EDUCATIONAL TRAINER

A1

Product number
MSMPI01



Fully functional multipoint petrol injection (MPI) system integrates Audi/VW OEM components to simulate the operation modes of the fuel injection and ignition system. Showing structure of the engine control system, its components and operation modes, conduct various measurements and diagnostic procedures.



Features

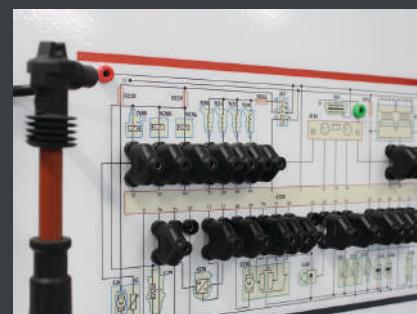
- Demonstrates multipoint petrol injection (MPI) system operations, including fuel supply, injection quantity, and spray pattern quality.
- Transparent fuel tank and visible spark plug operation allow students to observe internal processes.
- Features manual adjustment of engine crankshaft speed and air/fuel mixture via oxygen sensor signal simulator.
- Includes a detailed electric wiring diagram with built-in banana plug jumpers for accurate measurements and fault simulations.
- Simulates faults by disconnecting banana plug jumpers, with the ability to simulate over 20 different faults.
- Allows for comprehensive ECU diagnostics, including reading/erasing fault codes, live data display, and actuator activation.

Value for Students

- Realistic and safe training using OEM multipoint petrol injection components
- Practical understanding of fuel supply, injection quantity, spray pattern, and ignition systems
- Visual demonstration of fuel pump operation and crankshaft-camshaft synchronization
- Electrical circuit analysis with wiring diagrams and component identification
- Real-time parameter measurement with banana plug connectors, oscilloscope, multimeter, and scan tools
- Hands-on fault simulation, ECU diagnostics via OBD II, sensor value adjustments, and control unit configuration

Specifications

- Dimensions: 1820 x 1360 x 500 mm (71.65 in x 53.54 in x 19.69 in)
- Weight: approx. 70 kg (154 lb)
- Power Supply: 12V from battery or power supply unit (battery and power supply unit not included)
- Product number: MSMPI01
- Optional Accessories: Examination console for 10 hidden fault simulations, 12V battery, 220/12V power supply unit, OBD diagnostic scan tool





DIESEL ENGINE CONTROL SYSTEM CR/ EDC 15 EDUCATIONAL TRAINER

**A1****Product number**
MSCR01

The Common Rail Trainer with Bosch EDC 15C3-4.1 Engine Control System is a high-precision educational tool designed for in-depth technical training in diesel injection systems. Installed in a mobile aluminum frame, this training board-simulator utilizes OEM components and integrates Bosch's EDC 15C3-4.1 engine control system, illustrating the diverse operation modes of direct fuel injection systems.



Features

- Based on Bosch EDC 15C3-4.1 diesel system with direct injection
- Demonstrates high-pressure fuel supply and injector operation
- Dual-part design:
 - Electronic unit: ECU, sensors, actuators, diagnostic ports, wiring diagrams
 - Mechanical unit: High-pressure fuel pump, injectors, electric motor, measuring cylinders
- Adjustable simulators for MAF, ACT, CTS, IAT, MAP, and FRP sensors
- Manual crankshaft speed adjustment with real-time system response
- Integrated TFT voltmeter displays sensor voltages (APPS1/2, ACT, FPS, MAP, EGR, CTS, FTS)
- Comprehensive wiring diagram with contact points and jumper locations for fault simulation
- OBD II 16-pin diagnostics: ECU ID, fault code management, live data, actuator testing

Value for Students

- Learn operation of Common Rail diesel system with EDC15 control.
- Perform diagnostics via OBD and interpret live data and fault codes.
- Practice testing sensors, actuators, and fuel injection components.
- Understand fuel pressure control, timing, and injection sequence.



Specifications

- Dimensions:
 - Electronic Part (Board): 1820 x 1360 x 500 mm (71.65 in x 53.54 in x 19.69 in)
 - Mechanical Part (Trolley): 1500 x 800 x 500 mm (59.06 in x 31.50 in x 19.69 in)
- Weight: approx. 135 kg (297 lb)
- Power supply: 220/12 V (US 110 V)
- Made in EU
- Product number: MSCR01



**Watch the video
to see it in action**





EDUCATIONAL PETROL(GASOLINE) ENGINE TRAINER WITH DIRECT INJECTION SYSTEM (FSI) EURO4

A8**Product number**
MVFSI01

Fully functional petrol(gasoline) engine EURO4 (available EURO5/EURO6) FSI (fuel-stratified injection) with integrated instrument cluster, cooling, power supply, and exhaust systems. It provides real-time diagnostics via an OBD 16-pin connector, and allows precise measurements and fault simulations through open contacts and banana plug connectors. The model includes safety removable panels for easy access and maintenance, making it ideal for teaching modern automotive technologies and diagnostic procedures.



Features

- Includes detailed systems for fuel injection, exhaust, cooling, and power supply.
- Connect to the system using banana plug connectors for precise measurements and diagnostics.
- Simulate over 30 faults by disconnecting banana plug jumpers to enhance troubleshooting skills.
- OBD 16-pin Diagnostic Connector: Perform advanced diagnostics including ECU identification, fault code management, live data monitoring, and actuator tests.
- Equipped with removable panels to protect against hot and rotating parts, and an emergency stop button for immediate shutdown.
- Includes an electric wiring diagram with built-in banana plug jumpers for easy measurement and fault simulation.
- Plug and play design, requiring no additional mountings, assembly, or special preparation for operation.

Value for Students

- Fully functional system, gaining practical knowledge of direct petrol(gasoline) injection, exhaust, cooling, and power supply systems.
- Use OBD 16-pin diagnostic connector to perform ECU identification, read and erase fault codes, display live data, conduct actuator tests, throttle adaptation, and control unit coding.
- Connect to banana plug connectors to measure electrical signal parameters of sensors and actuators, including high voltage circuits.
- Develop troubleshooting skills by simulating over 30 faults through disconnecting banana plug jumpers.
- Measure exhaust gases before and after the catalytic converter, and use tools like oscilloscopes and multimeters for in-depth analysis.



Specifications

- Dimensions: approx. 1550 x 1000 x 1200 mm (61.02 in x 39.37 in x 47.24 in)
- Weight: approx. 310 kg (683 lb)
- Power supply: 12V battery
- Available EURO5/EURO6 configuration
- Product number: MVFSI01





EDUCATIONAL PETROL(GASOLINE) ENGINE TRAINER WITH DIRECT INJECTION SYSTEM (TSI) EURO 5

A8**Product number**
MVTSI01

The Educational Petrol(gasoline) Engine Trainer with Turbocharged Stratified Injection (TSI) EURO 5 features a fully operational 1.4 TSI engine, complete with a direct petrol(gasoline) injection system, turbocharger, and exhaust system. This model allows students to engage in detailed diagnostics through an OBD 16-pin connector and simulate over 30 faults using banana plug jumpers. It provides hands-on experience in measuring exhaust gases before and after the catalytic converter and understanding engine components through its open structure and safety removable panels. This trainer is ideal for mastering engine maintenance and advanced diagnostic techniques.



Features

- 1.4 TSI direct petrol(gasoline) injection system with turbocharger and exhaust system.
- OBD 16-pin diagnostic connector for ECU identification, fault code management, live data display, and actuator testing.
- Over 30 faults simulated via removable banana plug jumpers.
- Electrical signal parameters and high voltage circuits measured through banana connectors.
- Measurement of exhaust gases before and after the catalytic converter.
- Removable panels for protection against hot and rotating parts.
- Instrument cluster, measurement, and fault simulation panel within a closed aluminum frame.

Value for Students

- Study operation of a modern TSI direct injection petrol engine.
- Perform diagnostics via OBD system and measure real sensor signals.
- Practice fault finding and troubleshooting in engine management.
- Observe fuel injection, ignition, and emission control processes in action.
- Understand Euro 5 system layout and component interaction.

Specifications

- Dimensions: 1550 x 1000 x 1200 mm (61.02 in x 39.37 in x 47.24 in)
- Weight: approx. 300 kg (660 lb)
- Product number: MVTSI01

**Watch the video
to see it in action**



EDUCATIONAL DIESEL ENGINE TRAINER WITH CR (COMMON RAIL), EURO 6

**A9****Product number**
MVCR05

Fully operational EURO6 diesel engine model in a mobile frame. This training engine is specially designed to demonstrate Common Rail diesel injection system and operational structure. The educational training engine is based on real car original (refurbished) components with functional engine control system.

The training engine is a great educational tool that allows students to learn the structure of the engine and its components, power supply system, cooling system, engine control system. It also allows to study components and operation modes of the engine control system, perform various measurements, tests and other diagnostic procedures.



Features

- Includes EURO6 engine with Common Rail (CR) diesel injection system, cooling system, power supply system, and exhaust system based on Renault original components.
- Utilizes a Bosch EDC or similar control unit for accurate representation of engine management and diagnostics.
- Provides protection against hot and rotating parts while allowing clear visibility and easy access to engine components.
- Open contacts with banana plug jumpers for fault simulations and measurements. Supports fault code simulations and diagnostic procedures.
- Features OBD II 16-pin connector for comprehensive engine control unit diagnostics, including fault code reading/erasing, live data display, actuator activation, and control unit coding.
- Includes an integrated emergency stop button for immediate shutdown in case of an emergency.

Value for Students

- Learn EURO6 diesel engine's physical components, including the power supply system, cooling system, and exhaust system. The model features removable safety panels for clear visibility and hands-on access to internal engine parts.
- Learn about the operation of the engine's power supply and cooling systems. The model includes a complete Common Rail fuel supply system and cooling mechanisms.
- Bosch EDC or similar engine control system, including its operational modes and diagnostic features. Understand how the control unit manages engine performance and functions.
- Perform various measurements and diagnostic tests. The training model includes open contacts and built-in banana plug jumpers for system fault simulations and diagnostics.
- Simulate and diagnose over 20 different faults by disconnecting banana plug jumpers, increase troubleshooting skills and problem-solving abilities.
- OBD II 16-pin diagnostic connector to read and erase fault codes, display live system parameters, activate actuators, and perform throttle adaptation and control unit coding (depends on ECU).

Specifications

- Dimensions: 1550 x 1000 x 1200 mm (61.02 in x 39.37 in x 47.24 in)
- Weight: approx. 350 kg (770 lb)
- Product number: MVCR05





EDUCATIONAL MOTORCYCLE ENGINE TRAINER WITH A FUEL INJECTION SYSTEM

A8**Product number**
MVMC01

The Motorcycle Engine Training stand is an advanced instructional tool for in-depth technical and vocational training. Fully functional 2/4 cylinder motorcycle engine provides learning of ignition, fuel injection, and exhaust systems. Featuring an OBD II diagnostic connector for real-time engine monitoring and fault code management, this stand also includes open contacts for precise component measurement and fault simulation, making it essential for understanding modern motorcycle engine mechanics and diagnostics.



Features

- Based on a 2/4 cylinder engine with operational ignition, injection, and exhaust systems.
- OBD II diagnostic connector for engine parameter monitoring, fault code reading, and diagnostics.
- Open contacts for detailed measurement of system components and circuits.
- Capability to simulate faults by removing jumpers, with fault codes appearing in the engine control unit memory.
- Complete control panel with labeled wiring diagram, measuring contacts, jumpers, and a legend for easy operation.
- Sturdy metal frame with transport wheels for easy mobility and setup in various training environments.
- Plug and play design, requiring no additional mountings, assembly, or special preparation for operation.

Value for Students

- Engage directly with a fully functional 2/4 cylinder motorcycle engine, gaining practical experience with ignition, injection, and exhaust systems.
- OBD II diagnostic connector to monitor engine parameters, read and delete fault codes, and live data monitoring.
- Access open contacts for measurement and monitoring of various system components and circuits.
- Troubleshoot problems simulating faults through jumper removal, allowing observation of changes in engine operation and in diagnostic processes.
- Operate and adjust the engine via a comprehensive control panel, with all controls and wiring diagrams clearly labeled for ease of use.
- Integrated throttle handle and gear lever for full engine testing experience.

Specifications

- Dimensions: 1160 x 950 x 1520 mm (45.67 in x 37.40 in x 59.84 in)
- Weight: 218 kg (480 lb)
- Power supply: 12 V battery
- Fuel: Gasoline (higher than RON 92 (V))
- Product number: MVMC01



LAMBDA SENSOR EDUCATIONAL TRAINER



A1

Product number

MSLAMB01

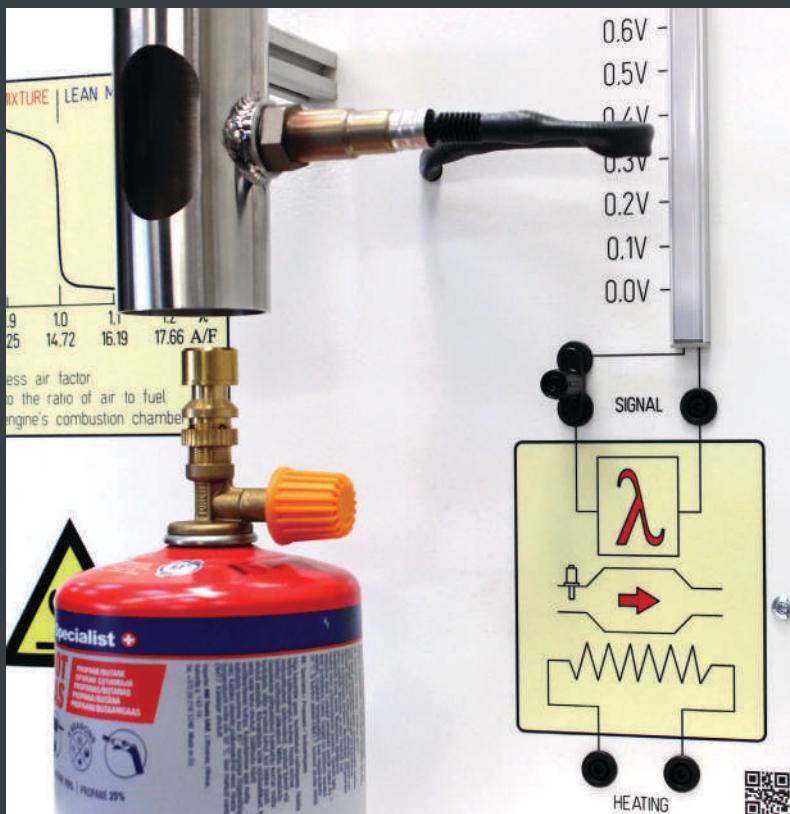


Compact and mobile trainer designed to demonstrate the operating principles of zirconia-type lambda (oxygen) sensors used in automotive exhaust systems. The trainer includes a functional sensor exposed to simulated exhaust heat and variable air-fuel ratios. Real-time output voltage changes are displayed via LED bar and external multimeter connection points. Manual controls allow mixture simulation from rich to lean conditions. Integrated educational diagrams support visual understanding of closed-loop fuel control systems.



Features

- Real working zirconia-type lambda sensor.
- Manual rich/lean mixture simulation with gas heating.
- Vertical stainless steel heating chamber with flame observation window.
- LED voltage indicator bar from 0.0 V to 1.1 V.
- Signal and heater terminals for external measurement.
- Educational fuel/air mixture chart with λ and A/F correlation.
- Protective steel housing and aluminium base structure.
- Quick setup with no software or calibration required.



Specifications

- Sensor type: Zirconia narrow-band lambda sensor.
- Output voltage range: 0.1 V (lean) to 1.1 V (rich).
- Heater resistance testable via external terminals.
- Visual display: LED voltage bar.
- Power supply: 220V (110V US).
- Dimensions: 525 x 374 x 420 mm (20.66 x 14.72 x 16.53 inch)
- Weight: approx. 9.95 kg (22lbs)
- Product number: MSLAMB01



Watch the video
to see it in action



EDUCATIONAL PETROL(GASOLINE) ENGINE TRAINER WITH LPG SYSTEM (MPI+LPG) EURO 4

**A8**

Product number

MVMP101-LPG02

Features

- Real OEM EURO4 engine with an integrated LPG system.
- Includes an OBD 16-pin diagnostic socket for comprehensive engine diagnostics and performance monitoring.
- Open contacts for detailed electrical measurements of system components and circuits.
- Simulation of engine management system faults through the removal of jumpers.
- Centralized control panel with labeled components and a wiring diagram, facilitating easy monitoring and control of the engine.

EDUCATIONAL PETROL(GASOLINE) ENGINE TRAINER WITH DIRECT INJECTION SYSTEM (TSI) EURO 5

**A8**

Product number

MVTSI02

Features

- 4-cylinder, petrol(gasoline) 1.2 TSI, 8 Valve, OHC engine for realistic training.
- OBD 16-pin diagnostic connector for ECU identification, fault code management, live data display, and actuator testing.
- Includes open contacts for measuring system components and circuits, enhancing diagnostic and analytical skills.
- Allows simulation of fault codes for practical troubleshooting training.
- Uses original equipment manufacturer parts for an authentic learning experience.
- Plug and play design, requiring no additional mountings, assembly, or special preparation for operation.

MPI PETROL(GASOLINE) ENGINE TRAINER WITH MULTIPROINT INJECTION SYSTEM EURO 4/5

**A8**

Product number

MVMP102-TOY

Features

- Operational Toyota 4-cylinder EURO 4/5 MPI petrol engine on mobile frame
- Centralized engine control with wiring diagram and component legend
- OBD II 16-pin diagnostics: live data, fault codes, actuator tests
- Includes key sensors and components: injectors, ignition coils, fuel pump, TCCS module, lambda, MAF, IAT, knock, and others
- Measurement access points and jumper-based fault simulation
- Plug-and-play design with no setup required



EDUCATIONAL DIESEL ENGINE TRAINER WITH CR (COMMON RAIL) SYSTEM EURO 5

**A9****Product number**
MVCR03

Features

- URO 5 Common Rail diesel engine with cooling, power supply, and exhaust systems
- Built on original Renault components with full engine management control
- OBD II 16-pin diagnostics: fault codes, live data, actuator tests, ECU coding
- Open contacts with banana plugs for fault simulation and measurement
- Safe design with visibility, access to components, and emergency stop button
- Plug-and-play operation, no setup or assembly required

EDUCATIONAL DIESEL ENGINE TRAINER WITH PD SYSTEM EURO 3

**A9****Product number**
MVPD01

Features

- Fully functional engine with Pumpe Deuse (PD) diesel injection system, cooling system, power supply system, and exhaust system based on Renault original components.
- Provides protection against hot and rotating parts while allowing clear visibility and easy access to engine components.
- Open contacts with banana plug jumpers for fault simulations and measurements. Supports fault code simulations and diagnostic procedures.
- Integrated OBD II 16-pin connector for comprehensive engine control unit diagnostics, including fault code reading, live data display, actuator activation, and control unit coding.
- Includes an integrated emergency stop button for immediate shutdown in case of an emergency.

EDUCATIONAL TRACTOR (FARM) DIESEL ENGINE WITH CR SYSTEM (COMMON RAIL)

**A9****Product number**
MVTCR01

Features

- Based on a John Deere 4-cylinder in-line diesel engine with Common Rail (CR) fuel injection system.
- Includes diagnostic socket for detailed engine diagnostics.
- Features open contacts for measuring and monitoring system components and circuits.
- Equipped with removable jumpers for fault simulation and diagnostics.
- Includes engine controls and a detailed wiring diagram with labeled components and legend for easy reference.
- Removable panels for protection against hot and rotating parts.
- Plug and play design, requiring no additional mountings, assembly, or special preparation for operation.



EDUCATIONAL PETROL(GASOLINE) ENGINE EURO6 WITH DIRECT MULTIPOINT INJECTION SYSTEM

**A8****Product number****MVMP104**

Features

- A complete, operational 4-cylinder multi-point injection (MPI) EURO6 petrol(gasoline) engine system with automatic transmission, mounted in a transportable metal frame.
- Centralized control for all engine operations, including a detailed electrical diagram and component legend.
- OBD II 16-pin connector for real-time parameter monitoring, fault code management, and performance element activation.
- Access points for measuring and monitoring component and circuit parameters.
- Jumper-based system for simulating various engine faults and operational changes.
- Includes fuel pump, injectors, ignition coils, throttle position sensor, camshaft position sensor, lambda sensor, knock sensor, speed sensor, air mass meter, intake air temperature sensor, coolant temperature sensor, and TCCS control module.
- Plug and play design, requiring no additional mountings, assembly, or special preparation for operation.



PETROL(GASOLINE) ENGINE TRAINER WITH DIRECT INJECTION SYSTEM (TSI) EURO 6

A8**Product number****MVTS103**

Features

- Fully working OEM 4-cylinder 1.2-2.0 Turbocharged Stratified Injection (TSI) EURO 6 petrol(gasoline) engine
- OBD II diagnostic connector enables monitoring of engine parameters, error reading/deleting, and performance element activation.
- Open electrical contacts allows measurement and analysis of system components and circuits.
- Fault code simulations provides the capability to simulate and diagnose engine systems faults.
- Engine control via a detailed control panel with labeled components and wiring diagram.
- Transparent hose level indicator for accurate fuel management.



EDUCATIONAL PETROL(GASOLINE) ENGINE TRAINER WITH MULTIPoint INJECTION SYSTEM + DYN



A8 | Product number **MVMP101-DYNO**

Training tool for automotive education with a fully functional EURO4 MPI petrol(gasoline) engine and integrated Dyno system. Features include OBD 16-pin diagnostics, electrical measurement points, fault simulation via jumper removal, and OEM components. Centralized control panel and built-in sensors enable real-time engine parameter monitoring.

Features

- Real OEM EURO4 MPI petrol(gasoline) engine with connected Dyno measurement system.
- Includes an OBD16-pin diagnostic socket for comprehensive engine diagnostics and performance monitoring.
- Open contacts for detailed electrical measurements of system components and circuits.
- Simulation of engine management system faults through the removal of jumpers.
- Centralized control panel with labeled components and a wiring diagram, facilitating easy monitoring and control of the engine.



EDUCATIONAL PETROL(GASOLINE) ENGINE TRAINER WITH DIRECT INJECTION SYSTEM (TSI) EURO 5 + DYN

A8 | Product number **MVTS101-DYNO**

Fully functional petrol(gasoline) turbocharged stratified injection (TSI) engine with measurement Dyno system for understanding and diagnosing modern internal combustion. This system, mounted on a robust metal frame with transport wheels with connected unit for measure engine performance.



Features

- Real OEM EURO 5 1.2 TSI 4-cylinder OHC petrol engine with Dyno measurement system
- Eddy current brake dynamometer with PC-based software for performance testing and data logging
- OBD II 16-pin diagnostics for fault codes, live data, and system monitoring
- Open contacts for electrical measurements and jumper-based fault simulation
- Centralized control panel with labeled components and wiring diagram
- Plug-and-play design with no assembly required



EDDY CURRENT BRAKE

A1**Product number****DYNO400**

Features

- Measure engine performance up to 400Nm torque, learn performance parameters.
- Understand engine performance measuring process and working principles.
- Use high quality dynamometer tool for precise engine measurements and gain expertise in automotive engine management and maintenance.
- Designed with a robust metal frame and four wheels for durability and space efficiency. The internal wiring is engineered for safe usage and protection against accidental damage. Equipped with an integrated computer and essential software.
- Includes an assembly flange for the engine flywheel and a driveshaft with coupling.

EDDY CURRENT BRAKE

A1**Product number****DYNO800**

Features

- Measure engine performance up to 800Nm torque, learn performance parameters.
- Understand engine performance measuring process and working principles.
- Use high quality dynamometer tool for precise engine measurements and gain expertise in automotive engine management and maintenance.
- Designed with a robust metal frame and four wheels for durability and space efficiency. The internal wiring is engineered for safe usage and protection against accidental damage. Equipped with an integrated computer and essential software.
- Includes an assembly flange for the engine flywheel and a driveshaft with coupling.

EDDY CURRENT BRAKE

A1**Product number****DYNO1000**

Features

- Measure engine performance up to 1000Nm torque, learn performance parameters.
- Understand engine performance measuring process and working principles.
- Use high quality dynamometer tool for precise engine measurements and gain expertise in automotive engine management and maintenance.
- Designed with a robust metal frame and four wheels for durability and space efficiency. The internal wiring is engineered for safe usage and protection against accidental damage. Equipped with an integrated computer and essential software.
- Includes an assembly flange for the engine flywheel and a driveshaft with coupling.



EDUCATIONAL TRUCK DIESEL ENGINE TRAINER WITH PLD SYSTEM

A9

Product number

MVSPLD01



Fully operational 4-cylinder truck diesel engine with a PLD injection system, mounted on a mobile frame. Built with OEM components, it features a functional ECU, fuel supply, cooling, power, exhaust systems, and instrument cluster. Designed for hands-on training, it enables the study of engine control operations, measurements, diagnostics, and testing procedures.

Features

- 4-cylinder PLD diesel injection system (Renault OEM).
- Fully functional ECU with OBD II diagnostics.
- Open banana plug connectors for measurements and fault simulation.
- Safety panels, emergency stop, and protected moving parts.
- Mobile, plug-and-play frame with internal wiring.
- Supports 10+ diagnostic fault scenarios.



EDUCATIONAL TRUCK DIESEL ENGINE TRAINER WITH PLD SYSTEM

A9

Product number

MVSPLD02



Fully operational 6-cylinder truck diesel engine with a PLD injection system, mounted on a mobile frame. Built with OEM components and a functional ECU, it provides hands-on training for studying engine structure, control systems, power supply, cooling, and performing diagnostics, measurements, and tests.

Features

- PLD 6-cylinder diesel injection system with Renault OEM components
- Includes cooling, power supply, and exhaust systems
- ECU-based engine management and diagnostic functionality
- Open contacts with banana plugs for electrical measurements and fault simulation
- OBD II 16-pin connector for fault code reading, live data, actuator tests, and ECU coding
- Clear access to components with safety protection and emergency stop button





EDUCATIONAL TRUCK DIESEL ENGINE TRAINER WITH VR TYPE PUMP EDC SYSTEM



A9

Product number
MVSVR01



Features

- VR Type EDC injection, cooling, power supply, and exhaust systems with Renault OEM parts
- Engine control unit enables realistic diagnostics and management
- Safety shielding with clear visibility and easy component access
- Open contacts with banana plugs for fault simulation and measurement
- OBD II 16-pin connector supports fault codes, live data, actuators, and coding
- Emergency stop button for immediate shutdown

EDUCATIONAL TRUCK DIESEL ENGINE TRAINER V8



A9

Product number
MVSCR03



Features

- Fully functional V8 diesel truck engine with OEM injection, cooling, power, and exhaust systems
- Control unit for realistic engine management and diagnostics
- Safety covers with clear visibility and easy access
- Open contacts with banana plugs for fault simulation and testing
- OBD II 16-pin connector supports fault codes, live data, actuators, and coding
- Emergency stop button for quick shutdown

EDUCATIONAL TRUCK DIESEL ENGINE TRAINER WITH CR SYSTEM (COMMON RAIL)



A9

Product number
MVSCR06



Features

- 6-cylinder common rail (CR) diesel injection system (Renault OEM).
- Fully functional ECU with OBD II diagnostics.
- Open banana plug connectors for measurements and fault simulation.
- Safety panels, emergency stop, and protected moving parts.
- Mobile, plug-and-play frame with internal wiring.
- Supports multiple diagnostic fault scenarios.



ENGINE CONTROL SYSTEM BOSCH MOTRONIC MED 7.5.10 (FSI) EDUCATIONAL TRAINER

A1**Product number**
MSFSI01

Fully functional BOSCH MOTRONIC MED 7.5.10 (FSI) training tool with direct petrol injection, visible fuel pump operation, adjustable air flow simulation, and over 20 fault simulations. Built with OEM components on an aluminum frame, it supports advanced diagnostics, parameter monitoring, and hands-on training for modern engine control systems.



DSG AUTOMATIC TRANSMISSION TRAINING STAND

A2**Product number**
MSATDSG01

DSG Dual-Clutch Gearbox Educational Trainer offers an advanced tool for the comprehensive study and training of direct shift gearboxes (DSG). This highly detailed and fully functional training model is designed to provide students and instructors with a hands-on experience in understanding the construction, operation, settings, and adjustments of DSG systems.



LPG TRAINING BOARD EDUCATIONAL TRAINER

A1**Product number**
MSLPG01

Training board designed to demonstrate the structure and operation of automotive LPG systems. It features a durable frame, detailed wiring diagrams, diagnostic connectors, and key components like a gas reducer, ECU, injectors, and sensors, offering a complete platform for hands-on technical training.



EDUCATIONAL PETROL (GASOLINE) ENGINE TRAINER WITH MULTIPONT INJECTION SYSTEM (MPI) EURO 3

A8**Product number**
MVMP101

EURO 3 petrol engine trainer with multipoint injection (MPI) system and OBD 16-pin diagnostics for fault code reading, live data, and ECU monitoring. Features over 20 fault simulations via banana plug jumpers, exhaust gas and high-voltage circuit measurement, and a closed aluminum frame with removable panels and emergency stop button for safe operation.





EDUCATIONAL PETROL(GASOLINE) ENGINE TRAINER WITH MULTIPONT INJECTION SYSTEM MPI EURO 5

A8**Product number
MVMPI03**

Fully functional 4-cylinder EURO 5 MPI petrol engine mounted in a durable metal frame with transport wheels. It features a control panel with electrical diagrams, component labeling, and essential devices for practical training in engine operation, diagnostics, and troubleshooting.



EDUCATIONAL PETROL(GASOLINE) ENGINE TRAINER WITH LPG SYSTEM (MPI+LPG) EURO 3

A8**Product number
MVMPI01-LPG01**

Combines a fully operational EURO 3 MPI petrol engine and a detailed LPG training board into one system. It provides hands-on training in both petrol and LPG technologies, featuring integrated diagnostics, measurement tools, and fault simulation capabilities for comprehensive engine education.



PETROL(GASOLINE) MPI V6 ENGINE EDUCATIONAL TRAINER

A8**Product number
MVMPI03-V6**

Fully functional Chrysler/Dodge V6 MPI engine trainer with OBD 16-pin, open contacts, and 30+ fault simulations. Includes full engine, cooling, power, and exhaust systems in a safe, enclosed frame. Supports multimeter and oscilloscope use for real-world diagnostics.



EDUCATIONAL PETROL (GASOLINE) ENGINE TRAINER WITH DIRECT INJECTION SYSTEM (GDI) EURO3

A8**Product number
MVGDI01**

Mobile GDI petrol engine trainer (EURO3) with OBD II, fault simulation, and adjustable control panel. Uses OEM parts for realistic diagnostics and hands-on learning. Ideal for studying components, wiring, and control systems in a safe, classroom-ready setup.



EDUCATIONAL PETROL (GASOLINE) ENGINE TRAINER WITH MULTIPONT INJECTION SYSTEM MPI EUROS

A8**Product number
MVMPI03-AT**

4-cylinder EURO 5 MPI petrol engine with automatic transmission. Integrated OBD II diagnostics, jumper-based fault simulation, and sensor access points. Includes ECU, injectors, ignition, and full sensor set in mobile frame.



EDUCATIONAL DIESEL ENGINE TRAINER WITH CR (COMMON RAIL) SYSTEM EURO 3

A9**Product number
MVCR01**

Fully functional Common Rail diesel engine trainer with OBD 16-pin, 12 fault switches, and banana plugs for signal measurement. Enclosed in a steel frame with removable panels and a control panel for safe, interactive training.





EDUCATIONAL DIESEL ENGINE TRAINER WITH CR (COMMON RAIL) SYSTEM EURO 4

A9

Product number
MVCR02

Fully functional EURO 4 Diesel Engine Trainer with Common Rail (CR) system, featuring integrated fuel injection, cooling, and exhaust systems. Designed for comprehensive training in diagnostics, troubleshooting.



HIDDEN FAULT SIMULATION FOR ENGINE CONTROL SYSTEM

Product number
AE12F-ENG

This optional add-on is perfect for enhancing our engine training setups. It allows learners to practice diagnosing and fixing common issues in engine control systems using real parts.



FUEL PRESSURE GAUGE

Product number
AEPRES-B-ENG

Optional fuel pressure gauge for petrol engines, mounted on the training stand panel. Provides precise fuel pressure readings for accurate system diagnostics.



EDUCATIONAL DIESEL ENGINE TRAINER WITH COMMON RAIL (CR) SYSTEM EURO 6

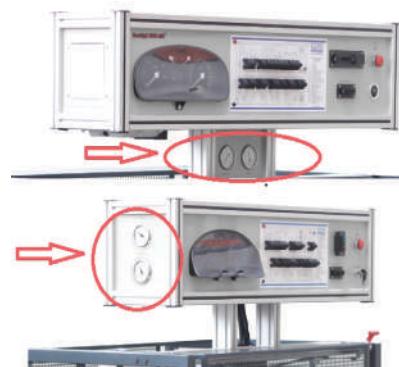
A9

Product number
MVCR04

Fully functional EURO 6 diesel engine trainer with Common Rail system, high-pressure pump, injectors, ECU, and OBD II connector. Includes 12V battery, electrical schematic, and supports fault simulation and diagnostics for hands-on training.



VACUUM MEASURING GAUGE

Product number
AEVAC-ENG

FUEL PRESSURE GAUGE

Product number
AEPRES-D-ENG

Optional fuel pressure gauge for diesel engines, mounted on the training stand panel. Provides precise fuel pressure readings for accurate system diagnostics.





EDUCATIONAL DIESEL ENGINE TRAINER WITH VE PUMP (TDI) EURO 2

A9**Product number**
MVVE01

Fully functional 1.9 TDI EURO 2 engine trainer with VE pump, featuring OBD 16-pin diagnostics, fault code simulation, and open contacts for electrical measurements. Ideal for hands-on training in technical and vocational automotive education.



EDUCATIONAL TRUCK DIESEL ENGINE WITH CR AD-BLUE SYSTEM

A9**Product number**
MVSCR04-ADBLUE

4-cylinder Common Rail EDC diesel engine with AdBlue (SCR) system, catalytic converter/filter, and turbocharger. Includes MAN instrument cluster, OBD 16-pin connector, fault simulation, real-time parameter monitoring, and electrical measurement via banana plug jumpers.



EDUCATIONAL DIESEL ENGINE TRAINER WITH CR (COMMON RAIL) SYSTEM EURO 5

A9**Product number**
MVTCR03

Diesel Engine Trainer based on Cummins QSB 6.7 T3 with Common Rail system, turbocharger, and diagnostic tools. Supports advanced training in engine operation, fault simulation, and diagnostics.



EDUCATIONAL TRUCK DIESEL ENGINE TRAINER WITH COMMON RAIL SYSTEM

A9**Product number**
MVSCR01

Fully functional 4-cylinder diesel engine trainer with Common Rail EDC system and integrated MAN instrument cluster. Features OBD 16-pin diagnostics, fault simulation, electrical measurements via banana plugs, and ECU configuration. Includes protective panels and emergency stop button for safe, hands-on training.



EDUCATIONAL TRACTOR (FARM) DIESEL ENGINE WITH CR SYSTEM (COMMON RAIL) AND ADBLUE SYSTEM

A9**Product number**
MVTCR02

4-cylinder CR diesel tractor engine with turbocharger, DOC+DPF, SCR, and 30L AdBlue (DEF) system. Includes OBD 16-pin diagnostics, jumper-based fault simulation, and open contacts for measurements.



EDUCATIONAL MARINE DIESEL ENGINE WITH P3000 IN-LINE PUMP

A9**Product number**
MVMILO3

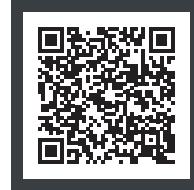
Marine Diesel Engine Trainer based on Cummins 6CTA 8.3, fully functional with integrated systems and diagnostic tools. Designed for in-depth study of engine mechanics, fuel intake, exhaust, ignition, and alternator systems.





DRIVETRAIN AND AXLES





WHEEL ALIGNMENT AND ELECTRONICS TRAINING STAND

A3

Product number
MSVAZ02

The Wheel Alignment and Electronics Training Stand is designed to teach wheel geometry adjustment, steering, suspension, braking, and lighting systems in a realistic yet fully open training environment. The unit simulates a real vehicle chassis, built with accurate suspension mounting points and real automotive components.



Features

- Front McPherson-type suspension with adjustable upper strut mount for camber and caster angle adjustment.
- Rear independent multi-link suspension with separate spring and shock absorber layout.
- Fully operational lighting system including headlights, fog lights, tail lamps, and adaptive functions.
- Height and light sensors to demonstrate automatic and adaptive lighting control.
- Adaptive fog lights respond to steering direction for realistic cornering light behavior.
- Working rear lights with brake, reverse, and fog functions.
- Complete hydraulic brake system with pedal, ABS module, parking brake, and visible lines.
- Pressure gauges on each wheel to display hydraulic pressure during braking.
- Electric power steering (EPS) system with OEM steering column and dashboard switches.
- Functional turn indicators, lighting control, and instrument cluster operation.
- OBD diagnostic connector for testing lighting, braking, and instrument systems.
- Compact mobile steel frame design providing easy access and full system visibility.

Specifications

- Frame type: Open vehicle chassis structure.
- Suspension: Front McPherson / Rear independent multi-link.
- Lighting: Full LED and halogen system with adaptive sensors.
- Braking: Hydraulic system with ABS and pressure gauges.
- Steering: Electric power-assisted steering column.
- Diagnostic port: OBD-compatible.
- Dimensions: approx. 2000 × 1500 × 1500 mm (78.7 × 59 × 59 in).
- Weight: approx. 250 kg (551 lbs).



**Watch the video
to see it in action**





WHEEL ALIGNMENT TRAINING EDUCATIONAL TRAINER

**A3****Product number****MSVAZ01**

The AutoEDU Wheel Alignment Educational Trainer is an advanced instructional tool for teaching wheel geometry and suspension alignment. Built with OEM components, it features a McPherson-type front suspension and a multi-link rear suspension, allowing realistic practice in adjusting camber, caster, toe, and steering axis inclination angles. The trainer is compact, foldable, and mobile—ideal for classrooms where space, visibility, and repeatability matter.



Features

- McPherson-type front suspension with 8 adjustment points for precise alignment.
- Multi-link rear suspension with 3 adjustment points for detailed modifications.
- Adjustable camber, caster, toe, and steering axis inclination angles on both axles.
- Integrated hydraulic handbrake for front wheels and mechanical locking for rear wheels.
- Compatible with 3D, CCD, and mechanical wheel alignment systems.
- Quick setup with locking pins and easy reset to default parameters.
- Fully visible, accessible components without the need for a car lift.
- Foldable design for compact storage and convenient transportation.

Value for Students

- Learn to measure and adjust camber, caster, toe, and SAI angles.
- Gain hands-on experience with McPherson and multi-link suspension designs.
- Practice using multiple wheel alignment tools (3D, CCD, rulers, lasers).
- Understand measurement of wheelbase, tread width, scrub radius, caster trail, thrust angle, and turning radius.
- Explore brake-suspension interaction using the front hydraulic brake.
- Develop diagnostic skills with central line, traction line, ride height, and toe difference angle checks.
- See in real time how small adjustments affect handling, stability, and tire wear.



Specifications

- Front suspension: McPherson type, multiple adjustment points.
- Rear suspension: Multi-link system with adjustable arms and shims.
- Wheel size: OEM standard R14 wheels.
- Locking system: Hydraulic handbrake (front), mechanical locks (rear).
- Compatibility: 3D, CCD, laser, and mechanical wheel alignment tools.
- Construction: Foldable frame with locking pins for safe setup and transport.
- Dimensions:
 - fully spread base 1100 x 3100 x 1700 mm (43.31 in x 122.05 in x 66.93 in);
 - Folded for storage 1100 x 1650 x 1700 mm (43.31 in x 64.96 in x 66.93 in) (standing on wheels);
 - Upright folded 1650 x 1100 x 1700 mm (64.96 in x 43.31 in x 66.93 in)
- Weight: approx. 195 kg (~430 lb)
- Product number: MSVAZ01

**Watch the video
to see it in action**





WHEEL ALIGNMENT TRAINING STAND WHEELS AND TIRES SET

Product number
MSRP01



The MSRP01 wheels and tires set is designed specifically for the MSVAZ01 wheel alignment training stand. This set ensures proper functionality and realistic training conditions. It must be ordered together with the MSVAZ01 stand for complete system compatibility.



PLATFORM FOR A QUADRACYCLE

A3 | Product number
PKX02

Mobile 4-wheel platform with fixing points for 2WD ATV (quadracycle), suitable for use in workshops or classrooms.



PLATFORM FOR A QUADRACYCLE

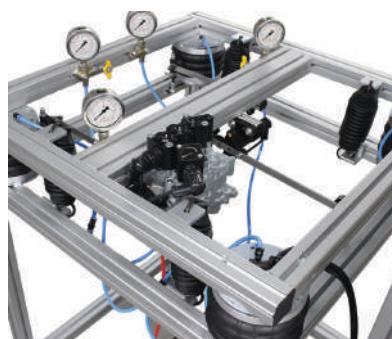
A3 | Product number
PKX04

Mobile 4-wheel platform with fixing points for 2WD ATV (quadracycle), suitable for use in workshops or classrooms.





SUSPENSION AND STEERING





ELECTRONIC STEERING RIG EDUCATIONAL TRAINER

A4

Product number
MSEVS01



Fully functional training rig for electric hydraulic power steering systems. Includes rack-and-pinion steering, electro-hydraulic pump driven by electric motor, control panel with OBD 16-pin connector, RPM and speed simulation. Features tachometer, speedometer, hydraulic fluid tank, engine simulation switches. Operates on 12V battery, mobile on braked transport wheels.



HYDRAULIC STEERING RIG EDUCATIONAL TRAINER

A4

Product number
MSHVS02



Fully functional hydraulic steering system ideal for automotive education and training. Integrated with a driving simulation and mobile on four casters, this trainer is perfect for technical and vocational training environments.



TRUCK AIR SUSPENSION EDUCATIONAL TRAINER

A4

Product number
MSPPS01



Operational ECAS training rig with full electronically controlled air suspension system. Includes air reservoir, ECAS ECU, front and rear height sensors, and remote control for height adjustment and diagnostics. Supports fault code simulation and system analysis via diagnostic socket.



ELECTRIC STEERING RIG EDUCATIONAL TRAINER

A4

Product number
MSES01



Electromechanical power steering trainer with motor, torque sensor, steering column, and control unit. Features OBD 16-pin connector, speed simulation, G85 angle sensor, and rotor speed sensor. Supports diagnostics and real-condition simulation.





BRAKES





BRAKE RIGS EDUCATIONAL TRAINER

**A5****Product number**
MSSS01

Fully functional hydraulic braking educational system with ABS. This advanced training rig incorporates a cross diagonal hydraulic circuit, brake booster, and both front and rear disc brakes with calipers. It is mounted on a mobile frame with 4 casters for ease of use and integration into various learning environments.



Features

- Includes front and rear discs with calipers, and a functional parking brake.
- Fully operational electronic ABS system with wheel speed sensors and solenoid valves.
- Demonstrates the increase in braking force with vacuum assistance.
- Four installed pressure gauges to monitor brake circuit pressures in real-time.
- Integrated OBD 16-pin connector for system diagnostics, fault code management, and live data display.
- Simulate driving conditions and wheel lock scenarios to study ABS behavior.
- Mounted on a solid frame with four castors for easy mobility and space-saving storage.

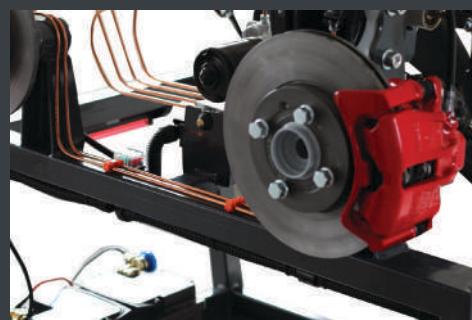
Value for Students

- Fully operational hydraulic brake system with brake booster and ABS
- Real-time fluid pressure monitoring via gauges on each brake circuit
- OBD 16-pin connector for diagnostics, fault code reading, live data, and air bleeding
- Includes wheel speed sensors, hydraulic pump, solenoid valves, and ABS control unit
- Simulates driving modes and wheel blocking to demonstrate ABS activation
- Built with OEM components on a safe, durable stand with all parts clearly visible



Specifications

- Dimensions: 1250 x 1000 x 750 mm (49.21 in x 39.37 in x 29.53 in)
- Weight: approx. 99 kg (218 lb)
- Power supply: 12 V from the battery (not included as standard accessory)
- Components: Includes brake pedals, master cylinder, brake fluid reservoirs, hydraulic lines, brake light, control panel, and transport wheels.
- Diagnostic Equipment Compatibility: Supports standard diagnostic tools for fault code reading, air bleeding, and parameter monitoring.
- Product number: MSSS01





ABS/ASR SYSTEM EDUCATIONAL TRAINER

**A5****Product number****MSABS-ASR01**

Fully functional educational tool designed to demonstrate and analyze the Anti-lock Braking System (ABS) and Anti-Slip Regulation (ASR) braking systems structure and operation. Housed in a mobile aluminum frame, this trainer incorporates Audi/VW OEM components and a BOSCH 5.3 ABS/ASR system, offering an in-depth educational experience for students and teachers in technical and vocational automotive education.

Features

- Functional BOSCH 5.3 ABS/ASR system with full set of operational components
- Pressure gauges for main and individual wheel brake circuits
- Original hydraulic components: brake pads, drums, lines
- Built-in wiring diagram with banana plug jumpers for measurements and fault simulation
- OBD 16-pin connector for ECU ID, fault codes, and live data
- Compatible with oscilloscope and multimeter for signal analysis
- Supports fault simulation for hands-on diagnostics
- Closed, safe, and durable structure with concealed wiring



ANTI-LOCK BRAKING SYSTEM BOSCH ABS 5.3 EDUCATIONAL TRAINER

A5**Product number****MSABS01**

Fully functional educational tool designed to demonstrate and analyze the Anti-lock Braking System (ABS) braking systems structure and operation. Housed in a mobile aluminum frame, this trainer incorporates Audi/VW OEM components and a BOSCH 5.3 ABS system, offering an in-depth educational experience for students and teachers in technical and vocational automotive education.



Features

- Functional BOSCH 5.3 ABS system with complete operational components
- Pressure gauges for main circuit and individual wheel monitoring
- Original hydraulic parts: brake pads, drums, lines
- Integrated wiring diagram with banana plug jumpers for testing and fault simulation
- OBD 16-pin connector for ECU ID, fault codes, and live data
- Supports oscilloscope and multimeter connections for signal analysis
- Enables fault simulation for hands-on troubleshooting
- Enclosed, durable, and safe design with hidden wiring



TRUCK AIRBRAKE EDUCATIONAL TRAINER

A5

Product number

MSSPPS01



The Truck Airbrake Educational Trainer is designed to provide automotive students with a detailed understanding of truck and trailer pneumatic systems. This training device is crafted using genuine components to replicate real-world configurations, ensuring students are well-prepared for the complexities of the industry.



Features

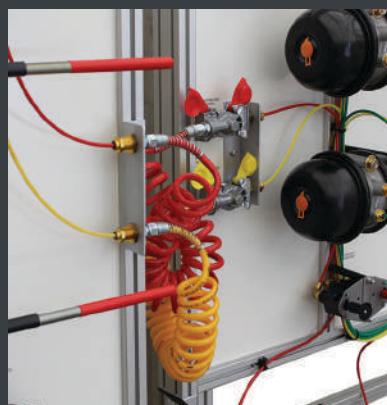
- Built with original components for industry-standard training
- Covers complete truck and trailer air brake systems
- Six gauges for truck lines, three for trailer lines for detailed diagnostics
- Realistic vehicle configuration for authentic hands-on experience
- Lightweight, durable aluminum frame for easy transport
- Designed for technical education with full testing and diagnostic capabilities

Value for Students

- Provides safe, realistic training with OEM components for truck repair
- Covers both truck and trailer systems for comprehensive study
- 6 gauges for truck lines, 3 for trailer lines for accurate diagnostics
- Simulates driving speeds, wheel rotation changes, air pressure variations, and system failures
- Includes electrical diagram with sensors, components, data lines, and diagnostic connections
- Designed for technical students to explore and test air brake system details

Specifications

- Truck stand dimensions: 1610 x 1820 x 500 mm (63.39 in x 71.65 in x 19.69 in)
- Truck stand weight: approx. 137 kg (302 lb)
- Truck stand power supply: ~230 V/110V (US version)
- Trailer stand dimensions: 1360 x 1820 x 500 mm (53.54 in x 71.65 in x 19.69 in)
- Trailer stand weight: approx. 83 kg (182 lb)
- Trailer stand power supply: ~230 V/110V (US version)
- Order number: MSSPPS01





TRUCK AIRBRAKES EDUCATIONAL TRAINER WITH ABS

**A5****Product number****MSSPPS01-ABS**

Fully functional educational trainer offers a detail and practical learning experience of truck and trailer pneumatic braking Anti-lock Braking System (ABS) systems. This advanced training equipment, featuring OEM WABCO components, provides students with an understanding of airbrake systems, including the functionalities and diagnostics of ABS. Housed in a mobile aluminum frame, this educational tool ensures a realistic and safe learning environment for technical and vocational automotive education.

Features

- Includes truck and trailer pneumatic braking systems with real WABCO components
- 8 gauges for truck lines, 5 for trailer lines for detailed analysis
- Functional ABS systems with sensors for fault simulation and diagnostics
- Simulates various faults for troubleshooting practice
- Uses authentic pneumatic components for realistic learning experience
- Durable, mobile aluminum frame for ease of use and longevity



TRUCK AIRBRAKES EDUCATIONAL TRAINER WITH ABS/EBS SYSTEM

A5**Product number****MSSPPS01-EBS**

Fully functional educational trainer offers a detail and practical learning experience of truck ABS and trailer pneumatic electronic Braking System (EBS) systems. This advanced training equipment, featuring OEM WABCO components, provides students with an understanding of airbrake systems, including the functionalities and diagnostics of ABS and EBS. Housed in a mobile aluminum frame, this educational tool ensures a realistic and safe learning environment for technical and vocational automotive education.

Features



- Includes truck and trailer pneumatic braking systems with real WABCO components
- 8 gauges for truck lines, 5 for trailer lines for detailed analysis
- Functional EBS systems with sensors for fault simulation and diagnostics
- Simulates various faults for troubleshooting practice
- Uses authentic pneumatic components for realistic learning
- Durable, mobile aluminum frame for easy use and longevity



ELECTROMECHANICAL PARKING BRAKE EPB STAND EDUCATIONAL TRAINER

A5**Product number**
MSEPS01

Fully functional electromechanical parking brake with multi-stage gear mechanism, electric motor, and hydraulic braking system, this trainer demonstrates the operation and components of a modern parking brake system. With visible cutaways and functional elements, it offers clear, practical insights into the workings of electromechanical parking brakes.

Features

- Visible, operational multi-stage gear mechanism with electric motor and belt drive for detailed gear interaction.
- Includes rear disc, caliper, and brake pads to demonstrate hydraulic parking brake system.
- Operates on 220V with dedicated buttons for engaging and releasing the brake.
- Clear view of internal gear mechanisms for educational use.
- Equipped with buttons for pressing and releasing the parking brake for practical demonstrations.



TRUCK TRAILER WABCO EBS D 2S/2M BRAKING SYSTEM EDUCATIONAL TRAINER

A5**Product number**
MSPPS-EBS-D

Truck trailer WABCO EBS D 2S/2M braking system educational trainer is an advanced tool designed to facilitate the comprehensive learning of pneumatic and electronic braking systems in truck trailers. Built with original WABCO components, this trainer provides a realistic and detailed examination of the EBS (Electronic Braking System) and pneumatic braking technologies, ideal for vocational and technical education settings.



Features

- Fully functional WABCO EBS D 2S/2M braking system with pneumatic and electronic components.
- 6 pressure gauges for monitoring brake circuit pressures at each wheel.
- Simulates wheel slipping and ABS fault scenarios for system analysis.
- ISO diagnostic connector for ECU ID, fault codes, live data, and reprogramming.
- Simulates driving conditions to observe braking and ABS performance.
- Integrated safety feature for immediate shutdown in emergencies.



TRUCK TRAILER WABCO EBS-E 4S/3M BRAKING SYSTEM TRAINER

A5**Product number****MSPS-EBS-E**

Fully functional WABCO EBS training system designed for studying and diagnosing electronic braking systems in trucks and trailers. Enables hands-on practice with real pneumatic and electronic components under safe, simulated driving conditions.

Features

- Complete WABCO EBS with 4 ABS sensors.
- Functional pneumatic braking system.
- Diagnostic via OBD 16-pin connector.
- Driving and braking simulation.
- Six pressure measuring gauges.
- Integrated fault simulation for troubleshooting practice.



TRUCK TRAILER WABCO TEBS-E BRAKING SYSTEM TRAINER

A5**Product number****MSPS-TEBS-E**

Fully functional WABCO TEBS-E training stand designed for learning and diagnosing electronic braking systems in truck trailers. Provides real pneumatic operation, electronic control, and driving simulation for hands-on training.



Features

- Complete WABCO TEBS-E system with ABS sensors.
- Functional pneumatic braking circuit.
- Diagnostic via OBD 16-pin connector.
- Driving and braking simulation.
- Six pressure measuring gauges.
- Integrated fault simulation for diagnostics practice.

THE BASICS OF ELECTRONICS TRAINING



ELECTRICAL SYSTEMS





BASICS OF ELECTRONICS TRAINING STAND

**A6****Product number**
MSEMP01

This training stand is designed to teach the fundamentals of electronics through practical measurement and testing. It features integrated components such as resistors, capacitors, coils, diodes, transistors, DC motor, and switches, providing students with hands-on opportunities to learn core principles.



Specifications

- Resistors: Measures $1\ \Omega$ to $1\ k\Omega$; adjustable decades from $100\ \Omega$ to $1\ M\Omega$.
- Potentiometers: Measures $1\ k\Omega$ to $100\ k\Omega$.
- Capacitors: Measures $10\ nF$ to $10\ \mu F$.
- Coils: Measures $4.7\ \mu H$ to $10\ mH$.
- Diodes: Tests rectifier, Schottky, Zener, LED, and photodiodes.
- Transistors: Tests PNP, NPN, N-Channel, and P-Channel MOSFETs.
- Switches: Includes manual and push-button switches.
- Relays: Supports relay testing.
- Lamps: Integrated for testing lighting circuits.
- Phototransistors: Open measurement points for hands-on testing.
- PWM: Includes high-power manual PWM driver.
- Voltage regulator: Manual voltage control testing.
- DC motor: Simulates motor operation with visual spinning.
- Multimeter: Built-in for precise measurements.
- Measuring wires: Includes 12 wires with a stand.
- PJEZO signaler: Supports signal generation connections.

Features

- Integrated resistors, capacitors, potentiometers, coils, and diodes for diverse measurement scenarios.
- Built-in transistor testing for PNP, NPN, N-Channel, and P-Channel MOSFETs.
- Manual switch, push button, and PJEZO signaler connection points for interactive circuit exploration.
- DC motor simulation for learning correct wiring sequences and operational principles.
- High-power PWM driver and manual voltage regulator for hands-on learning of advanced electrical techniques.
- Removable multimeter provided with each stand for accurate and reliable measurements.
- Lightweight, mobile design with both vertical and horizontal mounting options.



Watch the video
to see it in action





TRAILER ELECTRICAL INSTALLATION TRAINING STAND

A6

Product number
MSASTR01

The Car Trailer Wiring Educational Trainer is designed to teach students how to correctly assemble and test electrical connections used in trailer lighting systems. The trainer provides a complete hands-on experience with 7-pin and 13-pin trailer socket systems, allowing learners to practice real-world wiring methods, test light signals, and understand how trailer circuits operate safely and efficiently.



Features

- Realistic layout of a trailer electrical system with visual light placement.
- 7-pin and 13-pin trailer sockets with corresponding plugs and adapters.
- Clearly labeled contacts according to DIN standards with wire color coding and ratings.
- Functional switches for all lighting circuits (turn, brake, fog, tail, and reverse).
- Includes connection cables for independent wiring practice.
- Operates from standard 220V power supply.
- Mounted on a durable tabletop aluminum frame.

Specifications

- Power supply: 220 V AC.
- Electrical system: 12 V DC.
- Sockets: 7-pin and 13-pin trailer connections.
- Adapters: 13-pin ↔ 7-pin included.
- Control panel with switches for all light functions.
- Dimensions: 720 × 700 × 300 mm (28.3 × 27.6 × 11.8 in).
- Weight: approx. 12 kg (26.5 lbs).



**Watch the video
to see it in action**





CAN BUS EDUCATIONAL TRAINER

**A6****Product number****MSCAN01**

Educational trainer designed to provide an understanding of the CAN BUS network system through hands-on experience. Based on OEM components from Mercedes-Benz, featuring the CAN GATEWAY 2.0 system. The trainer includes components such as the dashboard, engine ECU, smart key module, SRS Airbag ECU, and various control modules, all connected through a detailed internal network. It offers a realistic and practical approach for students to learn about CAN BUS networks, including the diagnosis of system faults and component interactions.



Features

- Includes dashboard, engine ECU, smart key, ignition module, lock module, SRS Airbag ECU, central CAN Gateway module, door control modules, and window lifting motors.
- Capable of simulating over 10 system faults, including open/short circuits and incorrect signal levels.
- Equipped with banana plug connectors for measuring electrical parameters, supports OBD II 16-pin diagnostics.
- Allows diagnosis of individual control modules, with fault code reading/erasure, live data display, and actuator tests.
- Features integrated wiring diagram with open contacts for detailed measurement and analysis.

Value for Students

- Study CAN BUS network structure, including CAN Gateway and its interaction with components like dashboard, engine ECU, and central locking.
- Simulate 10+ system faults and diagnose via OBD II 16-pin connector, including fault code reading/erasure and control unit activation.
- Use banana plug connectors to measure electrical parameters of components such as window motors and control modules.
- Perform diagnostics with oscilloscopes and multimeters to analyze system parameters and signals.
- Control components like window motors and central locking via the CAN network, studying module communication and fault impact.
- Realistic training with OEM components for hands-on car repair experience.

Specifications

- Dimensions: T820 x 1360 x 500 mm (71.65 in x 53.54 in x 19.69 in)
- Weight: approx. 60 kg (132 lb)
- Power supply: 12V from battery (battery not included as standard accessory)
- Optional accessories: 12V battery, 220 (110V)/12V power supply unit, automotive oscilloscope, CAN network analyzer, OBD diagnostic scan tool
- Product number: MSCAN01





CAN AND LIGHTNING SYSTEMS EDUCATIONAL TRAINER

A6

Product number

MSCAN03

The Multifunctional Vehicle Systems Educational Trainer is a complex platform designed to demonstrate the operation and interaction of multiple automotive systems. It includes functional lighting, comfort, ventilation, and CAN communication systems, allowing students to analyze real electrical connections and control principles. All components are interconnected using OEM connectors and operate as in an actual vehicle, providing a realistic and safe learning environment.



Features

- Fully functional CAN communication network with accessible measurement points.
- Integrated vehicle lighting system with front and rear lamps, automatic light activation through light and rain sensors.
- Original ignition key, light switch, and steering column levers for turn indicators, hazard lights, and wipers.
- Operational heater fan system with adjustable airflow direction and blower speed control.
- Front and rear wiper motors controlled via OEM stalk switches.
- Complete vehicle doors featuring locking, window lift, and mirror adjustment systems.
- Dedicated switches for brake light and reverse light simulation.
- Mobile and modular frame for easy transport and disassembly.

Specifications

- Electrical system: OEM-based CAN bus network.
- Integrated systems: Lighting, ventilation fan and flap control, comfort features, wipers, CAN communication.
- Lighting control: Automatic and manual modes with sensor input.
- Connections: OEM connectors with labeled measurement points for diagnostics.
- Power supply: 12 V DC.





VEHICLE LIGHTING EDUCATIONAL TRAINER

**A6****Product number**
MSAS04

Practical educational trainer designed to demonstrate the full operation of an automotive lighting system. Built with OEM vehicle components, this trainer allows students to manually connect each circuit using external wires and follow wiring diagrams for system activation. It provides a complete, hands-on approach to understanding the function, layout, and interconnection of modern vehicle lighting systems.



Features

- Full automotive lighting system with front and rear lights, brake lights, indicators, fog lights, and number plate lights.
- Manual wiring connection using dedicated external wires for complete circuit setup.
- Includes 13-pin trailer connection socket, fuses, relays, and original vehicle switches.
- Warning lights, indicator switches, and lighting switches for realistic system control.
- OEM vehicle components for real-world training accuracy.
- Mobile stand with wheels for easy movement and storage.
- Plug-and-play operation, no assembly required.

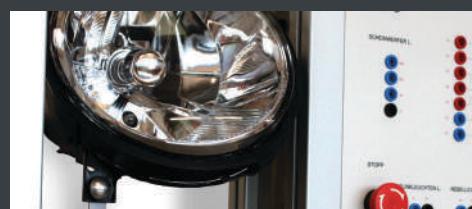
Value for Students

- Learn to read and analyze complex automotive wiring diagrams.
- Practice connecting complete vehicle lighting circuits using external wires.
- Understand the function and interconnection of fuses, relays, and switches.
- Gain hands-on experience with real OEM vehicle components.
- Develop diagnostic skills for identifying wiring and connection issues.
- Observe the real operation of brake lights, indicators, fog lights, and warning systems.



Specifications

- Components: Front lights, rear lights, brake lights, indicators, fog lights, number plate lights, trailer socket, fuses, relays, switches, and warning lights.
- Power supply: 220 V AC (110 V available for USA).
- Dimensions: 1820 x 1360 x 500 mm (71.65 x 53.54 x 19.69 in).
- Weight: approx. 60 kg (132 lb).
- Frame: Mobile steel/aluminum stand with wheels.
- Product number: MSAS04.



**Watch the video
to see it in action**





SENSORS AND ACTUATORS EDUCATIONAL TRAINER

**A6****Product number**
MSD01

Features

- Includes OEM sensors: ACT, CTS1, CTS2, MAF, TPS, Knock, and MAP sensors.
- Features voltmeter and temperature displays for real-time monitoring of sensor outputs and performance.
- PWM control allows for control and analysis of actuators such as the IAC valve, DC motor, and solenoid valve via PWM signals.
- Equipped with LED indicators for relay status, heater operation, and sensor feedback to facilitate troubleshooting and understanding of system functions.
- Safe, durable and mobile construction with internal wiring for best learning experience and safe environment.

AUTOMOTIVE CHARGING SYSTEM EDUCATIONAL TRAINER

**A6****Product number**
MSMSG01

Features

- 12V alternator mounted in a light aluminum frame for hands-on learning.
- Realistic battery charging/discharging with adjustable alternator rotation speed.
- Negative terminal fault simulation for troubleshooting practice.
- Displays for loading, charging, RPM, and voltage for real-time monitoring.
- Open contacts and meters (ammeter, voltmeter, speed meter) for detailed performance measurement.
- Emergency stop switch, ignition switch, and main switch for operational safety.

AUTOMOTIVE 12V STARTER EDUCATIONAL TRAINER

**A1****Product number**
AVS01

Features

- Real automotive starter motor mounted on a durable aluminum base.
- Bendix drive for accurate demonstration of starter engagement mechanics.
- Ignition switch for manual operation and system control.
- Protection plexiglass ensuring operational safety during hands-on training.
- Connection cables for a complete electrical circuit setup.
- Designed for technical and vocational training in automotive systems.



LIGHTING TRAINING BOARD

**A8****Product number**
MSAS03

Features

- Real headlamps, tail, fog, and signal lights operate as in vehicles.
- OBD II connector for live data and fault code diagnostics.
- Open contacts and wiring diagram for measurements and fault simulation.
- Includes rain/light sensors, headlight range and trailer control units.
- Control switches for lights, turn signals, and hazard operation.
- Safe, durable, mobile design with internal wiring.
- Optionally available with 7-pin or 14-pin trailer socket.

HEADLIGHT EDUCATIONAL TRAINER

**A6****Product number**
MSAPZ01

Features

- Includes a detailed diagram for understanding and practicing electrical connections and measurements.
- Study and operate of both high and low beam headlights.
- Learn about the functions and diagnostics of turn signals and standing lights.
- Manual connection of separate electrical circuits for advanced learning.
- Adjustable mechanism for studying light height adjustment.
- Use with a 12V battery (not included) to simulate real automotive power conditions.

IGNITION SYSTEM EDUCATIONAL TRAINER

**A6****Product number**
MSUS01

Features

- Includes DI/COP, twin spark, and TSZ-h ignition systems.
- Open contacts for easy measurement of electrical parameters.
- Integrated selection switch to switch between different ignition systems.
- High-voltage cables, ignition coils, spark plugs, and distributors visible for detailed study.
- Geared rotating disc and motor to simulate crankshaft rotation frequencies.
- Observe system operation and measure parameters using 12V contacts for diagnostics.



CAN BUS MOBILE TRAINER

A6

Product number
MSCAN02



Fully functional dashboard with OBD 16-pin diagnostics. Open contacts for CAN bus signal measurement. Supports high/low-speed CAN (500/100 kbps) and command activation. Enables CAN fault simulation and diagnostics.



LIGHTING EDUCATIONAL TRAINER

A6

Product number
MSAS01



VW/AUDI OEM lighting system with OBD 16-pin diagnostics, headlight motors, jumper fault simulation, and open contacts. Supports multimeter, oscilloscope, and headlight tester use. Mobile aluminum frame. Available with T7-T13 trailer socket.



LIGHTING EDUCATIONAL TRAINER

A6

Product number
MSAS01



VW/AUDI OEM lighting system with OBD diagnostics, banana jumpers, open contacts, adjustable headlight motors, and stereo radio. Closed wiring in mobile aluminum plug-and-play frame. Available with T7-T13 trailer socket.



LIGHTING EDUCATIONAL TRAINER

A6

Product number
MSAS02



VW/AUDI OEM lighting system with OBD 16-pin diagnostics, headlight motors, jumper fault simulation, and open contacts. Supports multimeter, oscilloscope, and headlight tester use. Mobile aluminum frame. Available with T7-T13 trailer socket.



AUTOMOTIVE 12V STARTER FUNCTIONAL MODEL

A1

Product number
AVS02

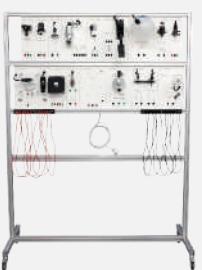


Starter motor trainer with OEM components, bendix drive, and ignition switch. Dual modes: standard operation (A) and solenoid/coil testing (B). Includes mode diagrams, current measurement loops, and visible safe design.



Product number
MSAE01

Training stand for practical study of automotive electronic systems. Features removable modules for testing and analyzing sensors and actuators, enabling learning of signal processing, calibration, and fault troubleshooting.





POWER SUPPLY UNIT

Product number
AEPWS22A

The Power Supply Unit is an efficient alternative to a traditional 12V battery for powering our training equipment. Designed for ease of use, it connects to standard household sockets (110V or 220V) to provide stable 12V power output for various training tools.



DIGITAL TRUCK TACHOGRAPH SIMULATOR

A6

Product number

MSTACH02



Digital Truck Tachograph Simulator designed to provide an in-depth understanding of digital tachograph systems. This fully functional simulator includes three types of cards: Driver, Workshop, and Company. Features advanced driving speed simulation, rest and driving time modes, and print capabilities for driving reports. It operates with a light, portable case, includes illuminated screens for clear visibility, and comes with comprehensive documentation in multiple languages. Equipped with an impulse transmitter and thermal printer paper rolls.



POWER SUPPLY UNIT

Product number
AEPWS37A

The Power Supply Unit is an efficient alternative to a traditional 12V battery for powering our training equipment. Designed for ease of use, it connects to standard household sockets (110V or 220V) to provide stable 12V 37,5A power output for various training tools.





SAFETY AND COMFORT





SRS BOSCH AB 8.4 (AIRBAG) EDUCATIONAL TRAINER

A7

Product number
MSSRS01



Fully functional SRS Bosch AB 8.4 Airbag training board simulator, housed in a mobile aluminum frame, is built with authentic Audi/VW OEM components, allowing students to explore and understand the intricacies of modern supplemental restraint systems (SRS). It offers practical insights into the construction and operation of car safety systems, including airbags and seatbelt tensioners.



Features

- Includes four airbags, crash sensors, airbag steering wheel module, spiral cable, and front and rear seat belts with igniters and tensioners.
- Exposes the structure of the passenger airbag and control unit.
- Functional control unit for diagnostics and a second unit with recorded crash data for study.
- Built-in banana plug jumpers for measuring and simulating system faults, with a detailed wiring diagram showing sensors, actuators, and connections.
- Enables connection to an oscilloscope/multimeter for measuring system parameters and performing comprehensive diagnostics through the OBD 16-pin connector.
- Capable of simulating over 10 system faults by disconnecting banana plug jumpers, enhancing troubleshooting training.

Value for Students

- Practical knowledge of the SRS Bosch AB 8.4 airbag system, including the structure and function of four airbags, crash sensors, airbag steering wheel module, and spiral cable.
- Diagnostics through the OBD 16-pin connector, enabling ECU identification, fault code reading/erasing, live data monitoring, actuator activation, and control unit encoding/configuration.
- Use banana plug connectors to measure electrical parameters of each system component with an oscilloscope or multimeter.
- Develop troubleshooting skills by simulating more than 10 system faults using banana plug jumpers, enhancing practical diagnostic abilities.
- Study the cutaway technology of the passenger side airbag and control unit to visualize internal structures and comprehend the integration of various safety components.
- Safe, durable and mobile construction with internal wiring for best learning experience and safe environment.



Specifications

- Dimensions: 1820 x 1360 x 500 mm (71.65 in x 53.54 in x 19.69 in)
- Weight: approx. 60 kg (132 lb)
- Power supply: 12V battery (optional accessory)
- Product Number: MSSRS01
- Optional Accessories: 12V battery, 220/12V power supply unit, automotive oscilloscope, OBD diagnostic scan tool





CAR AIRBAG SRS DEMONSTRATION EDUCATIONAL TRAINER

A7

Product number

MSAIRB01



CAR AIRBAG SRS demonstration educational trainer shows the structure and operation of the car airbag SRS (Supplemental Restraint System). Trainer uses compressed air to simulate the expansion of the airbag, offering a safe and controlled environment for learning. Equipped with essential components like the driver's airbag, passenger airbag, and pyrotechnic elements.

Features

- Demonstrates airbag expansion using a compressed air system, offering a safe and repeatable method to study airbag deployment.
- Includes a steering wheel with an integrated driver's airbag, a passenger airbag, and other critical elements like a pyrotechnic inflator device.
- All components are clearly visible, providing an unobstructed view of the airbag system's operation and structure.
- Equipped with a pneumatic valve and compressed air receiver, allowing students to engage directly with the airbag deployment process.
- Designed with safety in mind, using compressed air instead of pyrotechnic charges for demonstration purposes.



SRS SIEMENS III (AIRBAG) EDUCATIONAL TRAINER

A7

Product number
MSSRS02



Fully functional SRS SIEMENS III Airbag training board simulator, housed in a mobile aluminum frame, is built with authentic Audi/VW OEM components, allowing students to explore and understand the intricacies of modern supplemental restraint systems (SRS). It offers practical insights into the construction and operation of car safety systems, including airbags and seatbelt tensioners.



Features

- Includes four airbags, crash sensors, airbag steering wheel module, spiral cable, and front and rear seat belts with igniters and tensioners.
- Exposes the structure of the passenger airbag and control unit.
- Functional control unit for diagnostics and a second unit with recorded crash data for study.
- Built-in banana plug jumpers for measuring and simulating system faults, with a detailed wiring diagram showing sensors, actuators, and connections.
- Enables connection to an oscilloscope/multimeter for measuring system parameters and performing comprehensive diagnostics through the OBD 16-pin connector.
- Capable of simulating over 10 system faults by disconnecting banana plug jumpers, enhancing troubleshooting training.



AIR CONDITIONING AND CLIMATE CONTROL EDUCATIONAL TRAINER

A7

Product number
MSC05



Air-conditioning trainer with CLIMAtronic system, R134a refrigerant, expansion valve, and OBD 16-pin diagnostics. Includes open contacts, fault simulation, and mobile aluminum frame.



Features

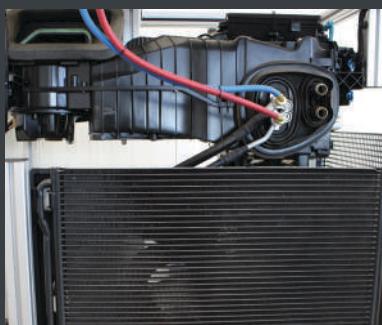
- Fully functional electronic climate control system CLIMAtronic with R134a refrigerant.
- Demonstrates different operational modes of expansion valve system.
- Includes an OBD 16-pole diagnostic socket for system diagnostics.
- Open contacts for measuring system components and circuits.
- Enables the simulation of fault codes for diagnostic training.
- Installed on a durable aluminum frame with castors for easy mobility and space saving.
- Detailed diagram showing all elements, sensors, actuator components, data transmission lines, and diagnostic connections.
- Allows monitoring of changes in temperature, air flow, and actuator positions.

Value for Students

- Learn operation of automotive air conditioning and climate control systems.
- Measure pressures, temperatures, and electrical signals in real time.
- Perform diagnostics, fault detection, and system performance testing.
- Understand refrigerant flow, compressor control, and system components.

Specifications

- Dimensions: 685 x 865 x 1680 mm (26.97 in x 34.06 in x 66.14 in)
- Weight: 108 kg (238 lb)
- Power supply: ~230 V, 50 Hz household electricity network
- Order number: MSC05



**Watch the video
to see it in action**





DUAL-ZONE AIR CONDITIONING AND CLIMATE CONTROL EDUCATIONAL TRAINER

A7

Product number

MSC04-R1234YF-D



2C Climatronic HVAC trainer with R1234yf refrigerant, dual-zone control, auxiliary heater, and OBD 16-pin diagnostics. Features exposed components, pressure gauges, fault simulation (15+ faults), and banana plug jumpers.



Features

- Fully functional system using R1234yf refrigerant, capable of independent temperature control for driver and passenger zones.
- Integrated auxiliary heater to demonstrate heating functions and the interaction with the climate control system.
- Advanced 2C Climatronic system for precise control of HVAC functions.
- Exposed HVAC compressor, electromagnetic compressor valve, mixing unit, airflow flaps, and refrigerant pressure gauges for educational purposes.
- OBD 16-pin diagnostic connector for ECU identification, fault code management, and live data monitoring.
- Ability to monitor operational parameters of all system components, including airflow fan speed, flap positions, and refrigerant pressures.
- Integrated fault code simulator with the ability to induce over 15 different system faults.
- Complete electrical wiring diagram with built-in banana plug jumpers for measurements and fault simulation.
- Uses OEM components for easy, safe, and realistic training that mimics real car.

Value for Students

- Study operation of dual-zone automotive A/C and climate control with R1234yf refrigerant.
- Analyze system pressures, temperatures, and electrical parameters in real time.
- Perform diagnostics and fault simulations using OBD interface and control panel.
- Understand compressor regulation, expansion valve function, and temperature control logic.
- Examine CAN communication between climate control modules and sensors.

Specifications

- Dimensions: 1240 x 1420 x 700 mm (48.82 in x 55.91 in x 27.56 in)
- Power supply: 220V (US 110V)
- Weight: 130 kg (286 lb)
- Product number: MSC04-R1234YF-D
- Auxiliary heater fuel: diesel



Watch the video
to see it in action





EDUCATIONAL TRAINER FOR THE WIPER MECHANISM

A7

Product number
MSLV01



Educational trainer for the wiper mechanism demonstrate the essential operations and components of an automotive wiper system. This educational tool is crucial for understanding the mechanics and electrical functionalities of wiper mechanisms, providing valuable insights into their design and operation.

Features

- Includes real automotive wiper motor, linkage, and control switches for a realistic training experience.
- Provides a complete wiring diagram for the wiper system, aiding in the study of electrical connections and component interactions.
- Allows manual operation of the wiper system, enabling students to observe and understand the mechanical movement and electrical control.
- All visible components for clear understanding of mechanism.



TRUCK TRAILER REFRIGERATION SYSTEM TRAINING STAND

A7

Product number
MSTRREF01



Fully functional truck trailer refrigeration system replicates the standard refrigeration unit found on truck trailers, featuring an internal combustion engine, a 400V electrical motor, and both cooling and heating capabilities. Mounted on a durable frame with casters for mobility, this training stand includes a comprehensive control panel and diagnostic socket for real-time system analysis and adjustments.



Features

- Fully functional refrigeration system with cooling and heating capabilities, powered by a diesel engine and a 400V electrical motor.
- Allows for precise adjustments of system settings and temperature modes via remote control.
- Equipped with a diagnostic connector for advanced system analysis and troubleshooting.
- Mounted on a sturdy frame with four casters for easy movement and positioning in the classroom.
- Ensure safe operation with accessible components protected by removable covers.
- Features sensors for temperature monitoring, fuel level indication, and system diagnostics.



AIR CONDITIONING AND CLIMATE CONTROL EDUCATIONAL TRAINER

A7

Product number
MSC02



CLIMATRONIC A/C trainer with R134a, expansion valve, OBD 16-pin diagnostics, fault simulation, and LED mode diagram. Includes visible HVAC components and enclosed wiring in a durable aluminum frame.



DUAL ZONE AIR CONDITIONING AND CLIMATE CONTROL EDUCATIONAL TRAINER WITH AUXILIARY HEATER

A7

Product number
MSC03-B



Dual-zone A/C trainer with R134a, 2C Climatronic, OBD 16-pin diagnostics, and optional diesel heater. Includes exposed HVAC components, pressure gauges.



DUAL ZONE AIR CONDITIONING AND CLIMATE CONTROL EDUCATIONAL TRAINER WITH AUXILIARY HEATER

A7

Product number
MSC03-D



Dual-zone A/C trainer with R134a, 2C Climatronic, OBD 16-pin diagnostics, and optional auxiliary heater. Features exposed HVAC components, pressure gauges, 15+ fault simulations, and oscilloscope/multimeter ports.



DUAL-ZONE AIR CONDITIONING AND CLIMATE CONTROL WITH R 1234YF GAS

A7

Product number
MSC04-R1234YF-B



2C Climatronic HVAC trainer with R1234yf, dual-zone control, OBD 16-pin diagnostics, and 15+ fault simulations. Features exposed components, pressure gauges, and jumper ports for oscilloscope/multimeter use.



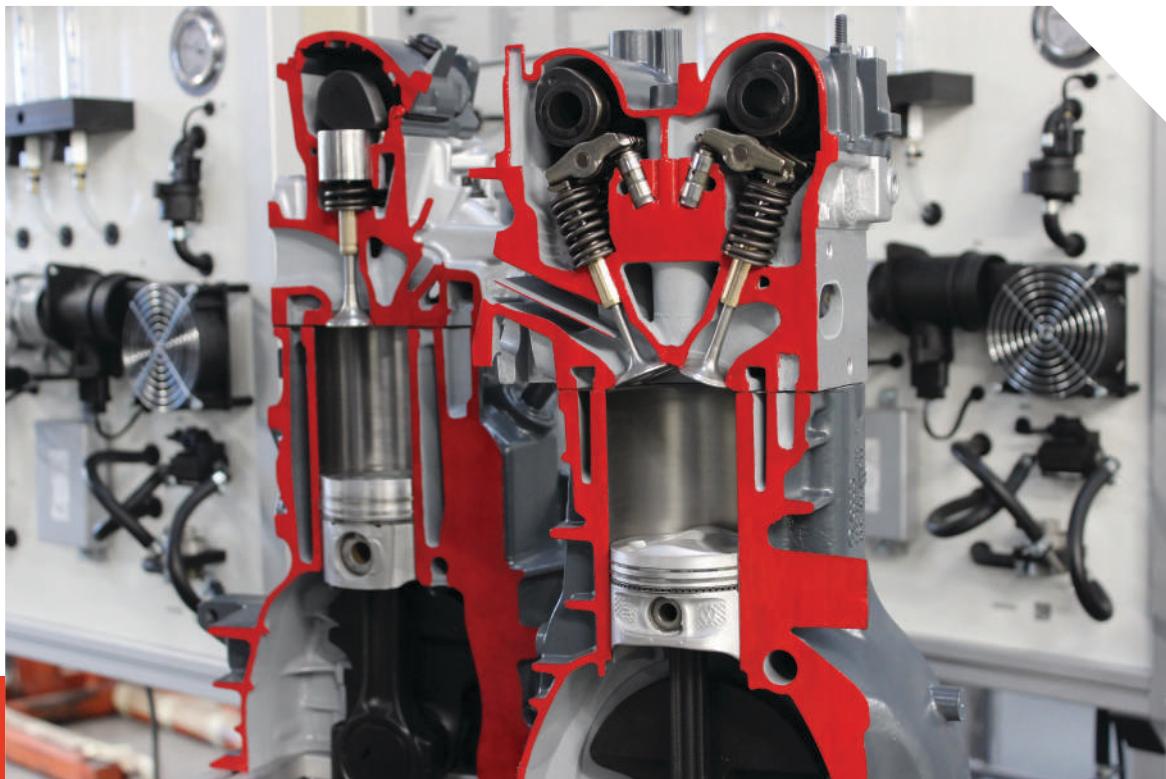
HIDDEN FAULT SIMULATION FOR AIR CONDITIONING AND CLIMATE CONTROL TRAINER

Product number

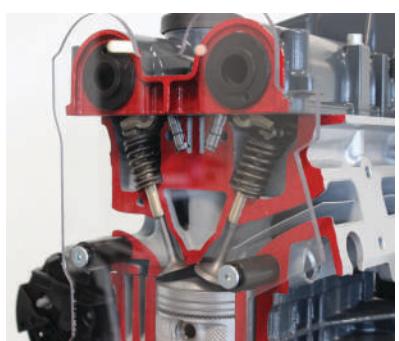
MSC-F

Optional hidden fault box enabling activation of up to 6 instructor-controlled faults. Simulates real-world issues in pressure, sensors, airflow, and compressor.





CUTAWAYS





PETROL(GASOLINE) DOHC ENGINE ½ CUTAWAY MODEL

A1

Product number
IVDB01



Petrol(gasoline) DOHC Engine ½ Cutaway Educational Trainer is tool specifically designed for the detailed study and demonstration of modern engine systems. This cutaway model offer training in timing belt replacement, auxiliary drive belt replacement, operation of a DOHC twin overhead camshaft system, water cooling system and alternator function. Mounted on a compact, easily transportable frame, this trainer is essential for technical and vocational automotive education and training.



Features

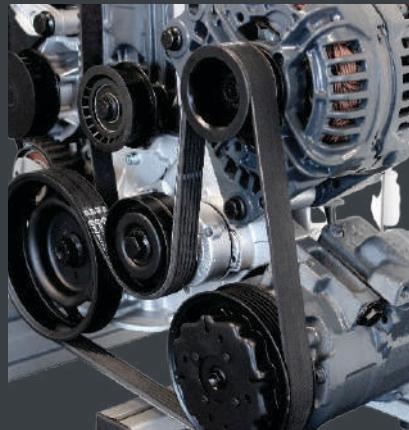
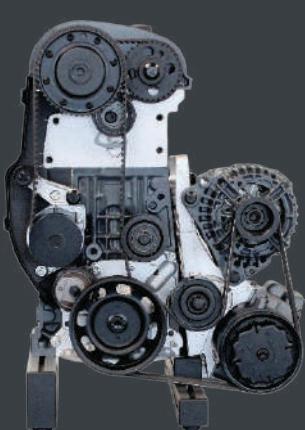
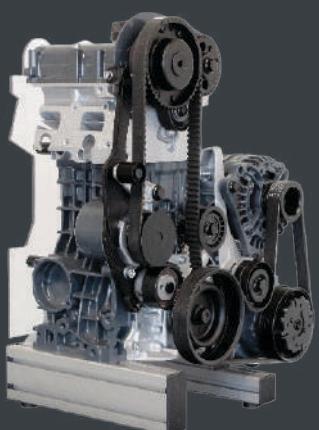
- Sectioned engine components: block, head, crankshaft, connecting rod, camshafts, pistons, rings, timing belt, sprockets, alternator belt, and tensioners.
- Manual crankshaft rotation to show movement of camshafts, pistons, and valves.
- Visible timing and alternator belt system with tensioners, camshaft sprockets, and water pump.
- Transparent safety covers over exposed parts.
- Bench clamps for secure mounting.
- Tool kit included for timing and alternator belt replacement with torque measurement.

Value for Students

- OEM engine model with visible DOHC components: pistons, valves, crankshaft, camshaft, timing and alternator belts.
- Rotate crankshaft manually to observe camshaft and valve operation.
- Perform belt removal, installation, and tensioning using provided tools and torque procedures.
- Learn structure and function of key engine systems in a safe environment.

Specifications

- Dimensions: 500 x 500 x 300 mm (19.69 x 19.69 x 11.81 in).
- Weight: Approx. 40 kg.
- Product number: IVDB01.
- Visible Components: Engine block, head, pistons with rings, crankshaft, connecting rod, DOHC camshafts, valves, valve lifters, water pump, timing belt with sprockets and tensioners, alternator belt with tensioner.





PETROL(GASOLINE) DOHC MPI ENGINE ½ CUTAWAY MODEL

A1

Product number
IVDB02



Petrol(gasoline) DOHC MPI Engine ½ Cutaway Educational Trainer is a highly detailed and precise training model designed to facilitate comprehensive learning of internal combustion engine mechanics. It is an essential tool for technical education, allowing students to gain in-depth understanding of dual overhead camshaft (DOHC) technology, timing chain replacement, and other critical engine functions. This model replicates the key components of a petrol(gasoline) engine with precision, making it an invaluable resource for automotive training environments.



Features

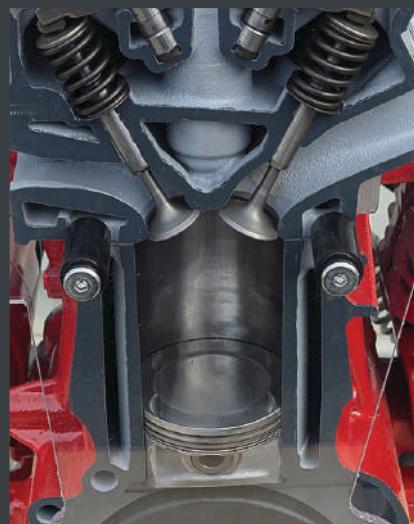
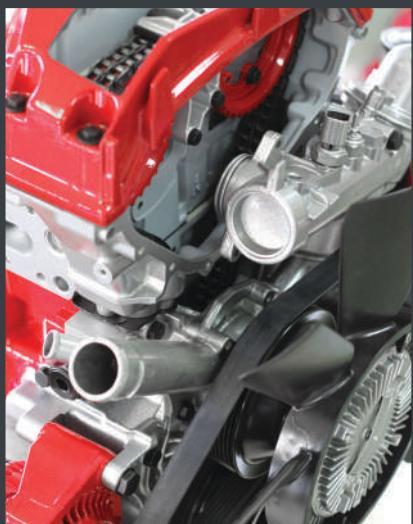
- Visible camshafts, valves, lifters, timing chain, and tensioners for DOHC system study.
- Exposed engine block, pistons, crankshaft, rods, and combustion chamber for component analysis.
- Alternator and timing chain systems with sprockets and tensioners for replacement training.
- Crankshaft can be rotated to demonstrate valve timing; lubrication required before use.

Value for Students

- Practice with DOHC system including 4-valve per cylinder layout, camshafts, valves, and lifters.
- Analyze piston motion, combustion chamber, intake/exhaust ports, and sectioned engine internals.
- Train in timing chain and auxiliary belt replacement using visible sprockets, tensioners, and belts.
- Rotate crankshaft to observe synchronized valve timing; use lubrication before rotation.

Specifications

- Dimensions: 750 x 670 x 440 mm (29.53 in x 26.38 in x 17.32 in)
- Weight: approx. 81 kg (178 lb)
- Safety Features: Protected by plastic covers on sectioned areas
- Product number: IVDB02





PETROL(GASOLINE) DOHC ENGINE CUTAWAY EDUCATIONAL TRAINER

**A1****Product number**
IVDB03

Sectioned engine with visible engine block, head, crankshaft, pistons, connecting rods, camshaft, and timing chain. Designed for technical training, it provides clear visibility of key engine components and mechanisms for detailed educational demonstrations.

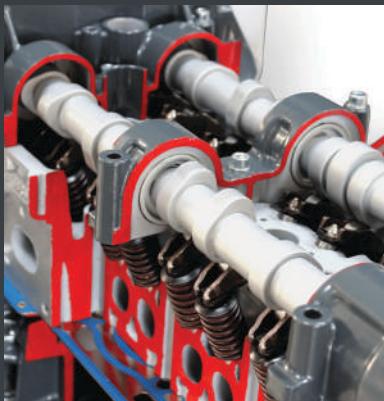
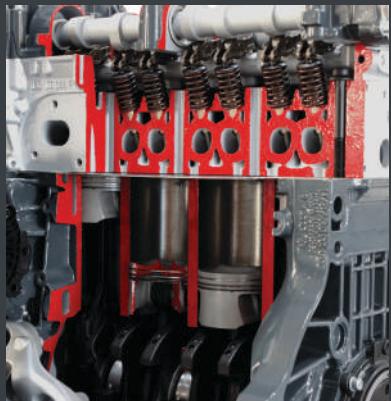


Features

- Engine chain replacement procedures.
- Practice loosening tensioner, removing and replacing auxiliary belt, inspecting auxiliary components.
- Auxiliary belt system with tensioner, alternator, cooling pump, and AC compressor.
- Set and check Top Dead Center (TDC).
- Perform camshaft alignment and adjustment with tools.
- Learn auxiliary pulleys, cooling pump, alternator, AC compressor removing and changing techniques.
- Cross-section view of engine block, cylinder head, crankshaft, pistons, camshaft, valves, and rocker arms.
- Manual crank rotation to observe piston, valve, and camshaft movement.
- Visible lubrication and cooling system channels.

Value for Students

- Understand DOHC engine architecture, component function, lubrication, cooling, and gas exchange systems.
- Learn timing chain layout, tensioner setup, guide installation, and chain replacement.
- Practice auxiliary belt removal, tensioner release, pulley, alternator, cooling pump, and AC compressor service.
- Develop Top Dead Center (TDC) setting, piston-to-valve clearance check, and timing mark alignment.
- Perform camshaft alignment, valve clearance check, rocker arm inspection, and adjust to factory specs.
- Complete over 30 practical tasks, including system inspection, fault simulation, and basic measurements.



Specifications

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**Watch the video
to see it in action**



DIESEL ENGINE ½ CUTAWAY MODEL

A1

Product number

IVOD01-CR01



Diesel OHC Common Rail engine, featuring a sectioned view of engine block, crankshaft, OHC camshaft with valves, pistons with rings, and a high-pressure CR pump. The model allows hands-on training in timing belt and alternator belt replacement, using specialized tools for torque measurement. The trainer's cutaway design enables the examination of piston operation, combustion chamber dynamics, and the OHC mechanism, all while ensuring safety with protective plastic covers. Compact and portable, it is ideal for use in technical and vocational automotive education.

Features

- Provides a detailed view of key engine components, including the engine block, crankshaft, OHC camshaft, pistons, and combustion chamber.
- Facilitates practical training in timing belt and alternator belt replacement with visible tensioners and camshaft sprocket.
- Allows for the manual operation of the crankshaft to demonstrate OHC mechanics and component movements.
- Equipped with safety protection to ensure a safe training environment.
- Lightweight design with bench clamps for easy placement on workbenches or tool trolleys.



DIESEL DOHC COMMON RAIL ENGINE ½ CUTAWAY EDUCATIONAL TRAINER

A1

Product number

IVDD01-CR02



Cutaway diesel engine with DOHC system and Common Rail injection system, visible and accessible components such as the engine block, crankshaft, DOHC dual overhead camshaft, timing chain, and alternator belt. It allows for practical demonstrations of timing chain and auxiliary drive belt replacement, with emphasis on the technical specifications and functionality of each component.

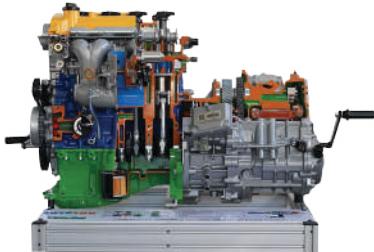


Features

- Includes engine block, engine head, crankshaft, connecting rod, DOHC dual overhead camshaft, pistons with rings, timing chain with camshaft sprocket, alternator belt with tensioner, air conditioning compressor, and high-pressure CR pump.
- Demonstrates piston, rings, combustion chamber, intake and exhaust ports, DOHC components, injector, and glow plug holes. Allows operation of the DOHC mechanism by turning the crankshaft, with a focus on safe, controlled interaction.
- Features all original timing chain, tensioners, and alternator belt components for demonstrating replacement procedures, including torque moments using specialized tools.
- Equipped with safety plastic protection to shield students from moving parts during demonstrations.



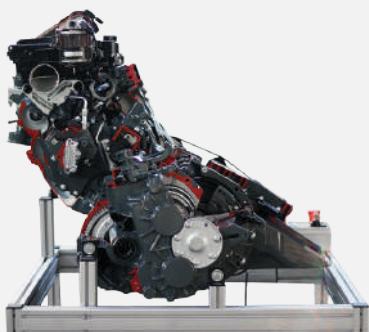
HYBRID SYSTEM PETROL/ELECTRIC SYSTEM CUTAWAY EDUCATIONAL TRAINER

**A1****Product number****AE34500M**

Features

- Toyota Hybrid System (THS) 1500 cm³ 4-cylinder engine with VVT-i technology, multi-point fuel injection, and dual-mode operation (engine and generator).
- The engine and generator can be rotated for detailed study of mechanical operations.
- Exposes internal components for easy observation and analysis of crankshaft, connecting rod, camshaft, pistons and rings, timing belt with camshaft sprocket and tensioners, alternator system, sensors, fuel injection system, transmission elements and more.
- The trainer is mounted on a sturdy stand with wheels, allowing for easy movement and secure positioning in various educational settings.

TURBO DIESEL ENGINE WITH GEARBOX CUTAWAY EDUCATIONAL TRAINER

**A1****Product number****AEMBA170**

Features

- Fully sectioned Mercedes A-Class 1700 cc, 4-cylinder turbo Sectioned Mercedes A-Class 1.7L, 4-cylinder turbo diesel engine with 16 valves and DOHC.
- Common rail direct injection system for fuel delivery.
- Includes air mass sensor, intake manifold, alternator, oil pump, and timing chain.
- Functional 5-speed gearbox with reverse and differential.
- 220V powered, reduced speed for safe demonstration.

6 CYLINDERS DIESEL TRUCK ENGINE “IVECO” CUTAWAY

**A1****Product number****AE36083E**

Features

- Based on the Iveco Cursor 6-cylinder diesel engine with electronically controlled pump injectors.
- Cutaway design with color-coded sections to highlight and differentiate various engine components and systems.
- 4-stroke engine operation with 4 valves per cylinder, turbo-compression, and water cooling systems.
- Electrically operated at 220 volts (110V US), running at a reduced speed for safe and clear observation of mechanical parts in motion.
- Mounted on a mobile stand with wheels for ease of use in educational environments.



TRUCK DIESEL ENGINE WITH COMMON RAIL SYSTEM (CR) CUTAWAY EDUCATIONAL TRAINER



A1

Product number
AE36082



Features

- Sectioned Iveco engine with a Common Rail (CR) fuel system.
- Includes 4-6 in-line cylinders, camshaft, and various mechanical parts.
- Visible lubricating circuits, fuel system, and cooling system.
- Operates at 220 volts (110V US), running at reduced speed for detailed observation.
- Engine parts and systems are professionally painted in distinct colors for enhanced differentiation and learning.

PETROL(GASOLINE) DOHC ENGINE ¼ CUTAWAY EDUCATIONAL TRAINER



A1

Product number
IVDB01-Q



Features

- Cutaway design offers a detailed, transparent view of engine internals, including twin overhead camshafts, pistons, and valves.
- DOHC configuration demonstrates the operation of dual overhead camshafts and four valves per cylinder.
- Aluminum base Provides a stable and durable platform for the model, ensuring reliable performance in educational settings.
- Designed specifically for technical and vocational automotive education, allowing in-depth study of engine components and functions.

IGNITION & CHARGING SYSTEM EDUCATIONAL TRAINER



A6

Product number
AE410000E



Features

- Functional components includes battery, spark coil, coil, distributor, and spark plugs, all mounted on a durable, plastic-plated wooden base.
- Sectional view allows for a detailed view of internal components, including the action of platinum points and the distributor, to better understand their interaction and function.
- Rotating flywheel simulates engine operation, demonstrating the mechanical processes involved in the ignition system.
- Real-time spark display shows spark generation at the spark plugs, providing a clear illustration of ignition timing and performance.



AUTOMATIC TRANSMISSION EDUCATIONAL TRAINER

A2

Product number

AE411060M



Features

- Manual rotation handle allows students to manually rotate the transmission and observe internal mechanisms.
- Torque converter demonstrates how torque is transmitted from the engine to the transmission.
- Oil pump shows the role of oil pressure in transmission operation.
- Stationary and rotary plate clutches illustrate the engagement and disengagement of gears.
- Planetary gear train provides insight into gear reduction and torque multiplication.
- Hydraulic circuit valve and centrifugal regulator explain fluid control and pressure regulation within the transmission.

GEARBOX CUTAWAY MODEL EDUCATIONAL TRAINER

A2

Product number

AE410990M



Features

- OEM based 5-speed gearbox Includes five forward gears and one reverse gear, representing common configurations in manual transmissions.
- Gear changes are simulated using a handwheel, providing an interactive learning experience.
- Exposes internal components such as gears, shafts, and synchronizers for detailed study.
- Mounted on a wheeled stand for ease of movement and positioning in different learning environments.

ZF 16S ECOSPLIT GEARBOX FOR HEAVY TRUCKS CUTAWAY EDUCATIONAL TRAINER

A2

Product number

AE411069M



Features

- Central gearbox with 4 forward and 2 reverse gears, detailed internal cutaway view of the gearbox, showcasing the central box's gear arrangements.
- Epicyclic unit and over-gear mechanism allows for detailed examination of the speed-gears and their operation, with the over-gear enabling gear ratio adjustments for 16 forward gears.
- Hand wheel for manual gear selection and engagement, providing hands-on experience with gearbox operation.
- Mounted on a stand with wheels for easy movement and positioning within the classroom.
- Designed to handle the rigors of educational environments with durable materials and construction.



CONTINUOUSLY VARIABLE TRANSMISSION (CVT) CUTAWAY EDUCATIONAL TRAINER



A2

Product number

AE411068M



Features

- Exposes internal components of the CVT, including V-belt pulleys and the transmission mechanism, for enhanced visibility and understanding.
- Features a handwheel for adjusting gear ratios, allowing students to observe the impact of changes in real-time.
- Includes a stable stand with a wheel for easy placement and movement in educational settings.
- Enables practical engagement with the transmission system, facilitating a deeper grasp of CVT principles and mechanics.

DUAL MASS FLYWHEEL WITH CLUTCH CUTAWAY EDUCATIONAL TRAINER



A2

Product number

AEDMF01



Features

- Cutaway dual mass flywheel shows the internal workings of the dual-mass flywheel, including primary and secondary masses, damper springs, and clutch cover.
- Interactive clutch mechanism demonstrates how the clutch system engages and disengages, highlighting friction surfaces and pressure components.
- Spring damping system illustrates the function of damper springs in mitigating rotational oscillations and enhancing smooth operation.
- Educational markings clearly labeled components for easy identification and understanding of their functions.

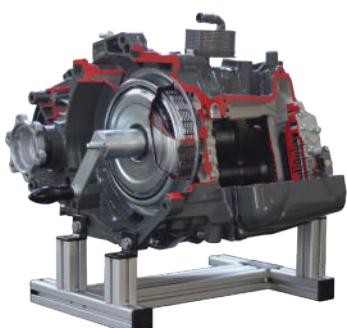
DIRECT SHIFT GEARBOX CUTAWAY EDUCATIONAL TRAINER



A2

Product number

AE1064



Features

- Cutaway design exposes internal gearbox components, providing clear visibility of the DSG system's intricate mechanisms.
- Dual-Clutch system demonstrates the operation of two separate clutches and their role in providing seamless gear shifts.
- Manual rotation allows for the simulation of gear changes and examination of gearbox operation under different conditions.
- Aluminum base provides a stable and durable foundation for the gearbox model, ensuring secure and consistent placement during use.



STARTER MOTOR FOR CARS CUTAWAY EDUCATIONAL TRAINER

A6

Product number

AE410070ME

Cutaway model of a 12V starter motor showing the electric motor, start-up relay, and Bendix drive. Designed for training, it simulates starter operation with clear visibility of internal components and is mounted on a stable base for demonstration purposes.



REAR AXLE HEAVY TRUCK WITH LOCKING DIFFERENTIAL CUTAWAY

A3

Product number

AE411198M

Cutaway model provides view of a heavy truck's rear axle system. It features a complete section including bevel gears, locking differential, axle shafts, reducer, planetary hub, drum brakes and a double air brake element. This model is mounted on a stable stand with wheels for ease of use and visibility.



ENGINE WITH MPI INJECTION, TURBOCHARGED, GEARBOX AND DIFFERENTIAL

A1

Product number

AE34808E

Cutaway model of a 16-valve, 4-cylinder turbocharged engine with multipoint injection, 5-speed gearbox, and integrated differential. Operates at 220V (110V US) at reduced speed. Features DOHC, balancing shafts, turbocharger, and water cooling. Exposes internal components for hands-on training.



TRUCK TURBOCHARGER CUTAWAY EDUCATIONAL TRAINER

A1

Product number

AETTC

The Truck Turbocharger Cutaway Trainer displays a precision-cut model with visible turbine wheel, compressor wheel, bearing assembly, wastegate, actuator, and variable geometry turbine. A clear view of turbocharger function and internal components for advanced automotive training.



ENGINE WITH MPI INJECTION, GEARBOX AND DIFFERENTIAL

A1

Product number

AE34807E

Fully functional cutaway model of a 16-valve, 4-cylinder engine with multipoint electronic injection, front-drive 5-speed gearbox with reverse, and integrated differential. Electrically operated at reduced speed for safe observation. Features DOHC system, balancing shafts, and water cooling. Cutaway design exposes internal components for hands-on training in engine and transmission operation.



ENGINE WITH MULTI-POINT ELECTRONIC INJECTION, TURBOCHARGED AND GEARBOX

A1

Product number

AE34806E

Cutaway 4-cylinder turbo engine with DOHC, turbocharger, balancing shafts, water cooling, and 5-speed gearbox. Exposes internal components for structural and functional analysis.





HYBRID SYSTEM PETROL/ELECTRIC SYSTEM CUTAWAY EDUCATIONAL TRAINER

L3

Product number
AE34500M

The Toyota Hybrid System (THS) 4-Cylinder Cutaway Engine Trainer features a 1500 cm³ in-line 4-cylinder engine with VVT-i, designed for hybrid system training. Mounted on a mobile stand, the cutaway model provides clear visibility of internal components, making it ideal for hands-on learning in hybrid vehicle technology.



ENGINE WITH MULTI-POINT ELECTRONIC INJECTION AND GEARBOX

A1

Product number
AE34805E

Cutaway model of a 16-valve, 4-cylinder engine with multipoint injection and rear-drive 5-speed gearbox with reverse. Operates reduced speed for safe training. Features DOHC, balancing shafts, and water cooling. Exposes internal components for clear observation of engine and transmission function.



FIAT / ALFA ROMEO 8 VALVE ENGINE WITH TURBO DIESEL COMMON-RAIL CUTAWAY EDUCATIONAL TRAINER

A1

Product number
AE36015E

8-valve turbo diesel engine with 1900 cm³ displacement, 115 hp at 4000 RPM, and 4-cylinder inline, 4-stroke configuration. Features turbocharger, Common Rail injection with electro-injectors, and 1350 bar high-pressure pump. Includes gear pump lubrication system, water/oil heat exchanger, and color-coded cutaway design for technical training.



16 VALVE 4 CYLINDERS ENGINE WITH MPI INJECTION CUTAWAY

A1

Product number
AE34800E

Cutaway engine model with 4-cylinder inline configuration, 1995 cm³ displacement, and DOHC system. Features multipoint injection, balancing shafts, and operates at 220V reduced speed for safe training. Includes gear pump-controlled lubrication, water cooling with electric fan, and color-coded sectioning for clear component visibility.



16 VALVE CHRYSLER TURBO DIESEL CR ENGINE WITH INTERCOOLER CUTAWAY EDUCATIONAL TRAINER

A1

Product number
AE36010M

16-valve, 4-cylinder turbo diesel engine with 4-stroke cycle, producing 150-170 hp at 4000 RPM. Features Common Rail injection with ECU-controlled electro-injectors and turbocharger with air-air intercooler. Includes DOHC with timing belt, balancing shafts, alternator, oil filter, and oil pump.



STANDARD PETROL MULTI-POINT ENGINE CHASSIS EDUCATIONAL TRAINER

Product number

AE35350E



4-stroke, 4-cylinder petrol engine with 2000 cm³ displacement and DOHC driven by toothed belt. Includes 5-speed gearbox with reverse, differential with hypoid gear, and dual braking system (front disc, rear drum).





DOCH ENGINE AND MPI INJECTION WITH LIGHT SYSTEM CHASSIS EDUCATIONAL TRAINER

Product number

AE35340E



4-stroke, 4-cylinder petrol engine with 2000 cm³ displacement and DOHC driven by toothed belt. Features 5-speed gearbox with reverse, hypoid differential, and dual braking system with front disc and rear drum brakes. Includes electronic ignition and functional lighting system.



ROBOTISED TIP-TRONIC GEARBOX CUTAWAY

A2

Product number

AE411066M



Tip-Tronic gearbox trainer with manual gear shifting via crank handle.



SINGLE-CYLINDER 4 STROKE PETROL(GASOLINE) ENGINE EDUCATIONAL TRAINER

A1

Product number

AE35245M



Single-cylinder 4-stroke petrol engine cutaway with 160 cc displacement and 6 hp output. Air-cooled and manually operated, it includes camshaft in crankcase, overhead valves, RPM regulator, oil pump, carburetor, air filter, silencer, and fuel tank.



DIESEL ENGINE 1/4 CUTAWAY EDUCATIONAL TRAINER

A1

Product number

IVOD01-Q



Single-cylinder diesel engine cutaway trainer for educational use, showing internal components and operation. Features two valves per cylinder, piston with rings, and sectioned engine head. Mounted on a durable aluminum base, it supports practical learning in diesel engine mechanics, thermodynamics, and combustion principles.



2 STROKE PETROL(GASOLINE) ENGINE CUTAWAY EDUCATIONAL TRAINER

A1

Product number

AE37450M



Cutaway 2-stroke engine trainer with 46 cm³ displacement, air cooling, and electronic ignition. Includes box carburetor, steel drive shaft, and die-cast aluminum cylinder with cast-iron jacket.



2 STROKE MOTORCYCLE ENGINE CUTAWAY EDUCATIONAL TRAINER

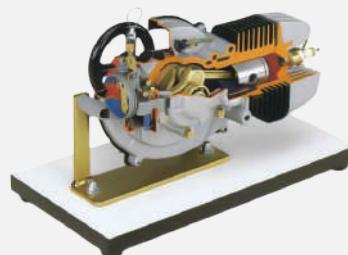
A1

Product number

AE37400



2-stroke motorcycle engine cutaway trainer with 48 cc single-cylinder, forced air cooling, and magnet flywheel ignition. Equipped with Dell'orto SHA 12/10 carburetor.





WANKEL ENGINE EDUCATIONAL TRAINER

A1

Product number

AE37500M



Manually operated Wankel engine trainer. Rotor turns once per three shaft rotations. Cutaway carburetor for internal view. Ignition bulb lights during compression phase. Shows rotor seals and epitrochoid stator.



MAZDA RX TWIN-ROTOR WANKEL ENGINE CUTAWAY EDUCATIONAL TRAINER

A1

Product number

AE34400M



Twin-rotor Mazda RX Wankel engine cutaway trainer. Includes flywheel, chain-driven oil pump, water pump with thermostat. Features electronic fuel injection and twin-spark ignition. Highlights unique rotary engine mechanics for technical training.



8V CYLINDERS TURBO DIESEL ENGINE FOR TRUCK CUTAWAY EDUCATIONAL TRAINER

A1

Product number

AE36084E



8-cylinder, 4-stroke turbo diesel engine cutaway. 17,200 cm³ displacement, 380 hp output. Bosch inline injection pump with mechanical governor. Dual turbochargers, direct injection, and intercooler system.



OPPOSED-PISTON ENGINE EDUCATIONAL TRAINER

A1

Product number

AE39260E



4/6-cylinder opposed-piston engine trainer. Air-cooled with gear-driven camshaft in crankcase. Magneto ignition and single-body carburetor. Displays lubrication, fuel, and cooling systems.



TURBO JET ENGINE MODEL EDUCATIONAL TRAINER

A1

Product number

AE39200E



Sectioned two-wave turbine engine trainer with visible low/high-pressure compressors, combustion chamber, and turbines; includes electro-motor for turbine rotation, showing air intake, fuel pump, burner, igniter, and thrust generation process.



MARINE OUTBOARD ENGINE 2 STROKES CUTAWAY EDUCATIONAL TRAINER

A1

Product number

AE37900M



2-stroke marine engine cutaway trainer with 2 or 3 cylinders. Includes water cooling system with centrifugal pump. Equipped with mechanical type converter. Cutaway design for clear view of internal components.

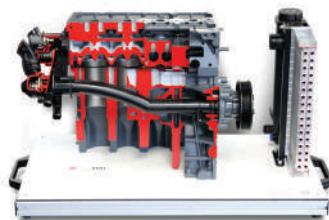




ENGINE COOLING SYSTEM CUTAWAY EDUCATIONAL TRAINER

A1**Product number****AE410401S**

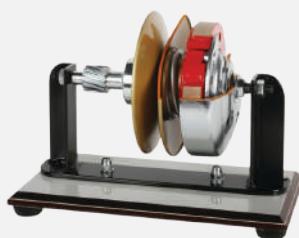
Cooling system cutaway trainer for internal combustion engines. Shows block-head canals, water pump, thermostat, temp bulb, expansion tank, and radiator. Visualizes fluid flow and heat exchange. Demonstrates conductive and convective heat transfer.



CENTRIFUGAL CLUTCH CUTAWAY EDUCATIONAL TRAINER

A2**Product number****AE411141M**

Cutaway centrifugal clutch trainer for mopeds. Shows friction shoes, return springs, and clutch drum. Demonstrates automatic engagement via centrifugal force. Visualizes speed-dependent operation and power transmission.



MEMBRANE SPRING CLUTCH CUTAWAY FUNCTIONAL EDUCATIONAL TRAINER

A2**Product number****IDSS01**

Cutaway membrane spring clutch trainer with manual operation. Includes flywheel, clutch disc, pressure plate, throwout bearing, release fork, and handle. Allows observation of clutch engagement and release.



TURBOSUPERCHARGER WITH WASTE-GATE VALVE (ON BASE) EDUCATIONAL TRAINER

A1**Product number****AE410430M**

Turbocharger trainer with functional waste-gate valve. Includes compressor manifold, diffuser, impellers, bearings, distributor, volute, and oil filter. Demonstrates exhaust flow control and boost pressure regulation.



HYDRAULIC CONTROL CLUTCH CUTAWAY EDUCATIONAL TRAINER

A2**Product number****AE411100S**

Hydraulic clutch system trainer with sectioned components. Includes hydraulic pump, actuating cylinder, and single-plate dry clutch. Features master cylinder, gravity tank, and adjustable pedal stroke. Shows fluid pathways and disengagement control.



TORQUE CONVERTER CUTAWAY EDUCATIONAL TRAINER

A2**Product number****AE411140S**

Sectioned torque converter trainer for automotive education. Exposes stator, turbine, and impeller. Demonstrates fluid coupling and torque multiplication.





4 WHEEL DRIVE FARM TRACTOR CUTAWAY EDUCATIONAL TRAINER

Product number

AE38000E



4-stroke diesel engine trainer with 20 hp (16 kW) output. Features water cooling and trochoid pump lubrication. Includes 6-speed gearbox, 2 reverse speeds, and gear reducer. Sector steering gearbox, rear drum brakes, and 2-speed PTO. Shows dry single-disc clutch, rear differential with lock, and disengageable front drive.



FARM TRACTOR WITH DIESEL ENGINE CUTAWAY EDUCATIONAL TRAINER

Product number

AE38200E



Cutaway tractor trainer with 4-stroke, 4-cylinder diesel engine, 2000 cm³ displacement. Features indirect injection, water cooling, and overhead valves. Includes in-line injection pump and globe-shaped steering box. Gearbox with 4 forward speeds plus reverse. Shows detailed lubrication, cooling, and injection systems.



TRACKED TRACTOR TRANSMISSION EDUCATIONAL TRAINER

A2

Product number

AE38360M



Tracked tractor transmission cutaway trainer with manual crank handle. Displays clutch unit, gearbox, pinion gear, ring gear, steering clutch, and final reducer.



FARM TRACTOR WITH DIESEL ENGINE EDUCATIONAL TRAINER

Product number

AE38110E



Tire-wheeled farm tractor trainer with 4-stroke, 2-cylinder diesel engine. Features indirect injection, overhead valves, and water cooling. Includes 6-speed gearbox with 2 reverse speeds and dry single-disc clutch. 12V electrical system with Fiat R90-90/12 dynamo, 60Ah battery, and lighting.



“MASSEY-FERGUSON”/“LANDINI” FARM TRACTOR CUTAWAY EDUCATIONAL TRAINER

Product number

AE38300E



Perkins 4-cylinder diesel engine with 49 kW at 2200 rpm and 254 Nm at 1400 rpm. 24F/12R synchromesh transmission with underdrive and reverse shuttle. Independent PTO at 540 and 750 rpm. Rear hydraulic lifter with 2600 kg capacity. 8-disc mechanical brakes, oil bath air cleaner. Hydraulic flow rate: 42.3 L/min.



RADIAL ENGINE CUTAWAY EDUCATIONAL TRAINER

A1

Product number

AE39280E

Cutaway trainer of 9-cylinder, single-row air-cooled radial engine. Bore: 155.6 mm, Stroke: 174 mm, Displacement: 29.88 L. Features master rod with moving connections and air cooling. Double ignition: 2 spark plugs and 2 magnetos per cylinder. Output: 746 kW (1,000 hp) at 2,200 rpm, Compression ratio: 6.45:1.





HYBRID TRANSMISSION MG (MOTOR/GENERATOR) TOYOTA PRIUS EDUCATIONAL TRAINER

A2

Product number

AE411082M



Operational cutaway trainer of Toyota Prius MG1 unit. Demonstrates hybrid power management and regenerative charging. Shows hybrid power distribution and control systems.



GEARBOX WITH CLUTCH CUTAWAY EDUCATIONAL TRAINER

A2

Product number

AE411030M



5-speed gearbox with reverse and dry single-plate clutch. Free-ring straight cone synchronizers for smooth shifting. Shows main shaft, gears, sleeves, and roller bearings.



4X4 VEHICLE TRANSMISSION WITH MECHANICAL GEARBOX EDUCATIONAL TRAINER

A3

Product number

AE411300M



5-speed gearbox with reverse and 2-speed reduction gear for 4x4 systems. Includes self-locking hypoid differentials and drive shafts with universal joints. Manual front-wheel drive engagement. Sectioned design for full visibility of transmission components.



GEARBOX CUTAWAY EDUCATIONAL TRAINER

A2

Product number

AE411005M



5-speed gearbox with reverse and visible differential. Demonstrates gear synchronization, reverse shaft, and planetary gears. Shows main shaft, synchronizing rings, and bearings in operation.



AUTOMATIC TRANSMISSION CUTAWAY EDUCATIONAL TRAINER

A2

Product number

AE411040M



Automatic transmission cutaway trainer with hydraulic torque converter. Epicyclic gear system: 3 forward speeds plus reverse. Includes planetary gears, control valves, and multiple-plate clutches. Features hydraulic oil pump; lubrication required for operation.



HEAVY TRUCK GEARBOX ZF 5HP CUTAWAY EDUCATIONAL TRAINER

A2

Product number

AE411071M



Heavy-duty automatic transmission cutaway trainer. Torque converter with lock-up clutch and hydrodynamic retarder. Rotating multi-disc clutches, fixed-position brakes, and oil cooler with oil-water exchanger.





FULLER 13 SPEED GEARBOX CUTAWAY EDUCATIONAL TRAINER

A2**Product number****AE411070M**

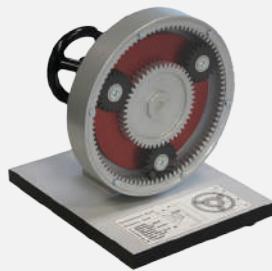
Non-synchronized gearbox trainer for 300/400HP heavy vehicles. Dual-section design with mechanical control for low gears and pneumatic control for speed gears.



PLANETARY-GEAR EDUCATIONAL TRAINER

A2**Product number****AE410790M**

Includes spur and bevel gears on movable axes. Demonstrates interaction of planetary, crown, and planet gears. Shows rotational and revolution motion principles.



WORM GEAR REDUCER CUTAWAY

A3**Product number****AE413094M**

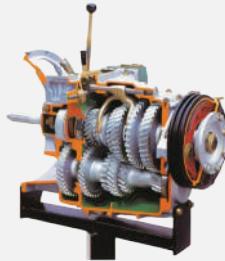
Displays worm shaft, worm wheel, bearings, and housing.



GEARBOX WITH TRIPLE REDUCTION GEAR CUTAWAY EDUCATIONAL TRAINER

A2**Product number****AE411080M**

4-speed gearbox with reverse and integrated transfer case. Dual levers for gear selection and reduction. Constant mesh gear pairs for precise torque control. Cutaway shows clutch, main/transmission shafts, reducers, and control forks.



ANGLE REDUCER CUTAWAY MODEL

A3**Product number****AE413092M**

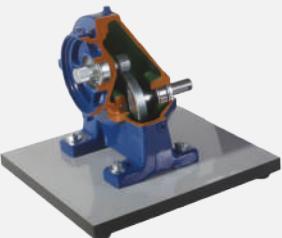
Cutaway mechanical angle reducer with visible bevel gears. Demonstrates 90° rotational motion transfer.



SINGLE-STAGE REDUCER CUTAWAY EDUCATIONAL TRAINER

A3**Product number****AE413096M**

Single-stage gear reducer trainer with exposed components. Demonstrates torque increase and speed reduction. Visible gears, shafts, and bearings for inspection.





SINGLE-CYLINDER INJECTION PUMP CUTAWAY EDUCATIONAL TRAINER

A1

Product number

AE410230M

Displays worm shaft, worm wheel, bearings, and housing.



INJECTION PUMP WITH 6 IN-LINE CYLINDERS CUTAWAY EDUCATIONAL TRAINER

A1

Product number

AE410200M

Features piston, sector gear, camshaft, and centrifugal governor. Includes two injector types, fuel filter, fuel pump, and check valve. Displays fuel feed pipe and pressure release.



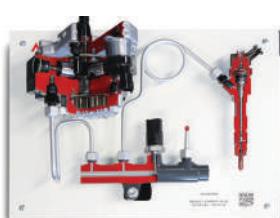
DIESEL COMMON-RAIL EDUCATIONAL TRAINER

A1

Product number

AE410300M

Includes CP3 radial piston pump (up to 1,800 bar). High-pressure rail with sensor and pressure-control valve. Equipped with solenoid and piezo-inline injectors. Gear-type pump supplies fuel to injection modules.



DIRECT INJECTION 2 STROKE DIESEL ENGINE CUTAWAY EDUCATIONAL TRAINER

A1

Product number

AE37100M

Includes injector, injection pump, pre-chamber, glow plug, and cooling system. Crank handle simulates engine cycle; bulb lights during expansion phase.



BOSCH INJECTION PUMP + PNEUMATIC SPEED GOVERNOR CUTAWAY EDUCATIONAL TRAINER

A1

Product number

AE410220M

Shows pump body, timing shaft, and pumping pistons. Includes pneumatic speed governor with diaphragm, spring, and internal lever.



DIESEL CR INJECTOR WITH SOLENOID VALVE CUTAWAY

A1

Product number

AE410305S

Displays nozzle, hydraulic servo, and solenoid mechanism. Shows injector states: closed, opening, open, and closing.

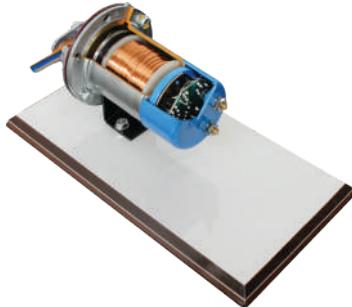




ELECTRICAL FUEL PUMP CUTAWAY EDUCATIONAL TRAINER

A1**Product number****AE410380S**

Electromagnetic piston, coil, and spring system. Includes suction and give-off chambers with valve system.



CP1 BOSCH HIGH-PRESSURE PUMP CUTAWAY

A1**Product number****AE410104M**

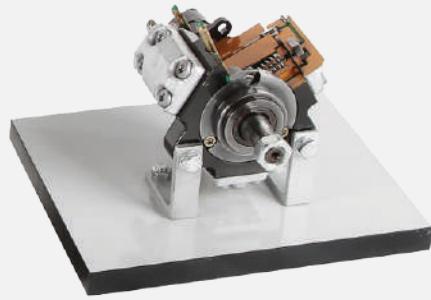
Includes three fuel-lubricated plungers. Generates fuel pressure up to 1350 bar.



CP3 BOSCH HIGH PRESSURE PUMP CUTAWAY

A1**Product number****AE410106M**

Features three fuel-lubricated plungers. Generates up to 1350 bar pressure.



CP4 BOSCH HIGH-PRESSURE PUMP CUTAWAY

A1**Product number****AE410108M**

Includes two fuel-lubricated plungers. Reaches pressure up to 2000 bar.



BOSCH VE ROTARY INJECTION PUMP CUTAWAY EDUCATIONAL TRAINER

A1**Product number****AE410240M**

Includes distributor plunger, vane transfer pump, and centrifugal governor. Features automatic advance variator and pressure regulation system.



CAV DPA-DPS ROTARY INJECTION PUMP CUTAWAY EDUCATIONAL TRAINER

A1**Product number****AE410250M**

Shows transfer pump, speed governor, advance regulator, and hydraulic sensor. Includes fuel circuit, small piston, and indirect injector. Demonstrates fuel flow, pressure regulation, and injection timing.





DIESEL INJECTION PUMP WITH 6 IN-LINE CYLINDERS CUTAWAY

A1**Product number****AE410180M**

Includes centrifugal governor and automatic advance variator. Features toothed axle, sleeve, plunger, delivery valve, and fuel feed pipe. Shows excess pressure release and fuel return systems. Contains adjusting springs, counterweights, and control levers.



CAV DPC INJECTION PUMP CUTAWAY EDUCATIONAL TRAINER

A1**Product number****AE410260M**

Displays hub drive, speed control lever, metering valve, and solenoid off valve.



DIESEL INJECTOR CUTAWAY

A1**Product number****AE410280S**

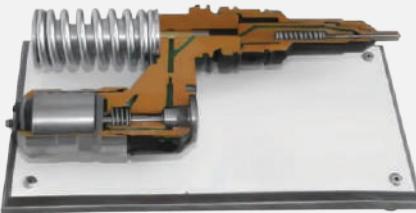
Displays internal parts: nozzle, needle, spring, and fuel channels.



INJECTOR PUMP CUTAWAY

A1**Product number****AE410110S**

Electromagnetic valve, pumping element, and dust seal.



DIESEL INJECTION VP44 BOSCH PUMP CUTAWAY

A1**Product number****AE410270M**

Designed for high-pressure direct injection diesel systems (over 1500 bar). Includes integrated micro-hybrid ECU for electronic control. Shows magnetic valve-controlled fuel injection and fuel metering.



DISC AND DRUM BRAKE CUTAWAY EDUCATIONAL TRAINER

A5**Product number****AE412030M**

Includes brake master cylinder, tank, and control lever. Cutaway caliper, disc, and drum assemblies for clear visualization. Demonstrates hydraulic force transmission and component interaction.





REAR SUSPENSION EDUCATIONAL TRAINER

A4

Product number

AE411204M



Shows axle, hub, bump stop, and full brake assembly with pistons and gaskets.



REAR-AXLE WITH DIFFERENTIAL TRAINER

A3

Product number

AE411200M



Shows planetary gears, ring gear, pinion, brake drum, and cylinder.



HYDRAULIC BRAKE CHASSIS EDUCATIONAL TRAINER

A4

Product number

AE411220M



Trainer with McPherson suspension, shock absorber, spring, and strut. Includes rack-and-pinion steering with hydraulic pump for power steering simulation. Features both disc and drum brakes for complete braking system study.



HYDRAULIC DUAL CIRCUIT BRAKE WITH SERVO BRAKE EDUCATIONAL TRAINER

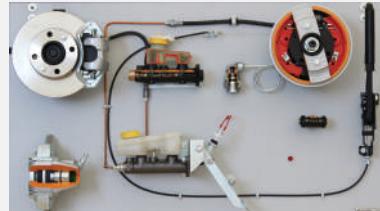
A4

Product number

AE412050M



Operational hydraulic brake system trainer with disc (225 mm) and drum (220 mm) brakes. Includes split brake pump, transparent oil tank, and vacuum servo brake unit. Features rear brake pressure relief valve.



SECTIONED FRONT SUSPENSION UNIT EDUCATIONAL TRAINER

A4

Product number

AE411210M



McPherson strut suspension trainer with rack and pinion steering. Includes shock absorber, coil spring, and disc brake assembly.



DRUM BRAKE CUTAWAY EDUCATIONAL TRAINER

A5

Product number

AE412010M



Cutaway drum brake trainer showing back plate, drum, wheel cylinder, and brake shoes. Demonstrates hydraulic pressure, self-adjusting mechanism, and emergency brake function.





PNEUMATIC AIR BRAKE EDUCATIONAL TRAINER

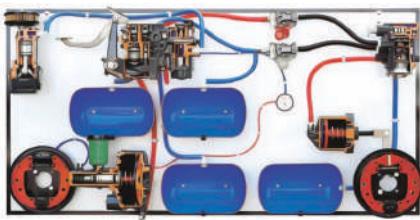
A5

Product number

AE412065S



Includes air compressor, triplex distributor, pressure brake booster, and trailer servo-distributor valve. Simulates real tractor-trailer braking scenarios. Covers hydraulic, mechanical braking, parking brake control, and maintenance training.



EV ELECTRIC VEHICLE JUNCTION BOX AND ELECTRIC MOTOREDUCER CUTAWAY MODEL

L3

Product number

AERZ65



Electric motoreducer with manual rotation. Cutaway sections of junction box show high-voltage connectors, fuses, and wiring architecture. Exposes internal gearing and shaft system in reducer.



ALTERNATOR SINGLE-FLOW COOLING CUTAWAY EDUCATIONAL TRAINER

A6

Product number

AE410080M



Alternator trainer with exposed stator, rotor, diodes, and voltage regulator. Demonstrates AC generation for battery charging and electrical supply. Includes slip rings, brushes, and pulley system for simulation.



TRUCK DISC BRAKE WITH PNEUMATIC CONTROL CUTAWAY

A5

Product number

AE411197M



Displays air chamber, push rod, brake lever, caliper, and disc. Designed for static demonstration of heavy-duty braking systems..



STARTER MOTOR WITH REDUCTION GEARS CUTAWAY

A6

Product number

AE410071M



Six-pole magnet field, four carbon brushes, solenoid switch. Includes commutator, pull-in/hold-in windings. Reinforced polyamide or sintered steel internal gear.



CVT ENGINE 4-STROKE SINGLE-CYLINDER WITH ELECTRONIC INJECTION CUTAWAY

A1

Product number

AE47815M



Single-cylinder 4-stroke engine with CVT, electronic injection, ignition, water cooling, disc brake, and silencer.

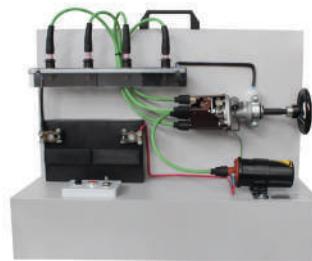




ELECTRONIC IGNITION SYSTEM EDUCATIONAL TRAINER

A1**Product number****AE410010**

Breakerless ignition system trainer for 4-cylinder, 4-stroke engines. Includes spark plugs, ignition coil, and distributor with magnetic pulser. Specs: 45 μ s spark risetime, 2 ms duration, 28 kV secondary voltage.



4 VALVE DOHC ENGINE HEAD CUTAWAY EDUCATIONAL TRAINER

A1**Product number****AE310369S**

DOHC engine head with 4 valves per cylinder, showing intake/exhaust ports, valve springs, injector, hydraulic tappets, rocker arms, camshaft, and oil/cooling channels.



TORSEN DIFFERENTIAL CUTAWAY MODEL

A3**Product number****AE411270M**

Shows internal gear arrangement for torque distribution. Includes Torsen types T-1, T-2, and T-3 applications.



IGNITION SYSTEM CUTAWAY EDUCATIONAL TRAINER

A6**Product number****AE410030**

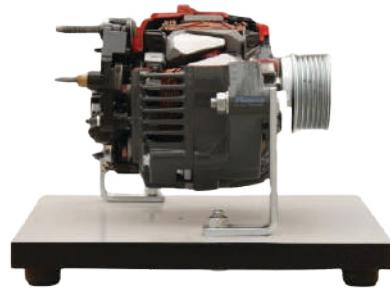
Mechanically timed ignition system trainer for 4-cylinder, 4-stroke engines. Includes spark plug, distributor, ignition coil, and wiring. Handwheel-operated distributor shows breaker points and centrifugal advance. Demonstrates 12V to high-voltage spark conversion and timing functions.



TRUCK ALTERNATOR CUTAWAY MODEL

A6**Product number****AESALT01**

Displays rotor, stator, rectifier, voltage regulator, slip rings, brushes, and cooling fan.



HYPOID DIFFERENTIAL CUTAWAY EDUCATIONAL TRAINER

A3**Product number****AE411280M**

Shows crown wheel, pinion gear, side pinions, and differential shaft. Demonstrates torque transfer and differential wheel rotation.





BEVEL HELICAL REDUCER CUTAWAY

A2

Product number

AE413110M



Cutaway helical gear reducer trainer with parallel shaft layout. Includes real helical gears, shafts, bearings, seals, and casing. Demonstrates torque reduction and speed adjustment principles.



GAS SHOCK ABSORBER CUTAWAY EDUCATIONAL TRAINER

A4

Product number

AE410638



Gas-filled shock absorber cutaway trainer for automotive education. Displays piston rod, cylinder, oil/gas chambers, and valve system.



AIR CONDITIONING SYSTEM EDUCATIONAL TRAINER

A7

Product number

AE410650M



Includes radial piston compressor, condenser, expansion valve, evaporator, and electric fans. Shows refrigeration cycle and airflow mechanics. Equipped with high and low-pressure hoses for cooling process visualization.



HYDRAULIC SHOCK ABSORBER CUTAWAY EDUCATIONAL TRAINER

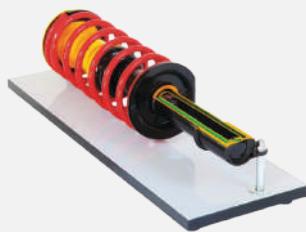
A4

Product number

AE410636



McPherson shock absorber cutaway trainer with damper spring. Shows pistons, fluid paths, and gas chambers. Demonstrates twin-tube and mono-tube damping systems. Includes basic and gas-charged designs.



TRUCK SHOCK ABSORBER CUTAWAY EDUCATIONAL TRAINER

A4

Product number

AETSA01



Shows piston rod, cylinder, compression/rebound valves, hydraulic chamber, and oil passages. Demonstrates hydraulic damping for vibration control and suspension stability.



RACK AND PINION, STEERING BOX CUTAWAY EDUCATIONAL TRAINER

A4

Product number

AE410730M



Shows toothed rod, steering column, pinion, and bushings. Demonstrates steering operation, gear ratios, and backlash control.

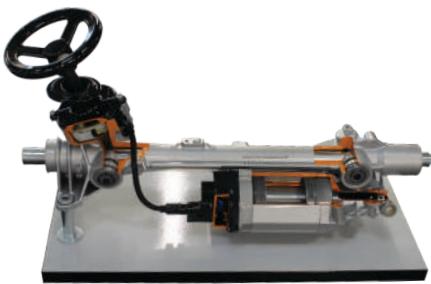




ELECTRICAL RACK AND PINION STEERING TRAINER

A4**Product number****AE410782M**

Includes electric motor, pinion, toothed sector, and steering sensors. Control ECU adjusts power based on vehicle speed.



ELECTRIC POWER-ASSISTED STEERING (EPS)

A4**Product number****AE410778E**

Operational EPS trainer with McPherson suspension, speed simulation (0–120 km/h), rack-mounted effort control, alternator simulation, and CAN diagnostics.



ENGINE WITH CHASSIS AND WORKING LIGHT SYSTEM

Product number**AE35274E**

Trainer with 1200 cm³ 4-cylinder petrol engine, MPI system, 5-speed gearbox, differential, dual-circuit brakes, and front/rear lighting; shows engine, fuel, lubrication, and cooling systems.



POWER STEERING WITH RE-CIRCULATING BALL SYSTEM

A4**Product number****AE410750**

Re-circulating ball power steering trainer with vane pump, manual drive, and visible hydraulic components.



PISTON SERVO BRAKE CUTAWAY TRAINER

A5**Product number****AE412070S**

Truck piston servo brake with integrated pump, showing vacuum chamber, piston, return spring, and hydraulic channels; color-coded and base-mounted for display.



FRONT DRIVE GEARBOX CUTAWAY TRAINER WITH DIFFERENTIAL AND CLUTCH

A2**Product number****AE410789M**

Manual front-drive gearbox cutaway trainer with integrated differential.





ELECTRONIC INJECTION MPI ENGINE WITH PETROL(GASOLINE)/ LPG SYSTEM CUTAWAY MODEL

A1

Product number

AE44300M



Petrol/LPG multipoint injection engine cutaway with visible injectors, sensors, ignition, LPG tank, and reducer.



PETROL(GASOLINE) ENGINE WITH DIRECT INJECTION 16 VALVES MPI INJECTION CUTAWAY

A1

Product number

AE44600E/G



4-cylinder, 16-valve petrol (gasoline) engine with Mitsubishi GDI system, DOHC, water cooling.



ENGINE WITH OVERHEAD VALVE (OHV) AND TIMING CHAIN CUTAWAY

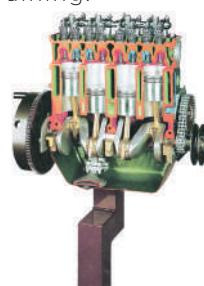
A1

Product number

AE45450M



4-stroke, 4-cylinder OHC petrol (gasoline) engine trainer showing internal components for engine operation and maintenance training.



PETROL(GASOLINE) ENGINE WITH DIRECT INJECTION 16 VALVES MPI INJECTION CUTAWAY

A1

Product number

AE44600M/F



Cutaway 4-cylinder, 16-valve petrol(gasoline) engine with direct injection, DOHC, and water cooling; shows internal components.



RACK AND PINION STEERING TRAINER

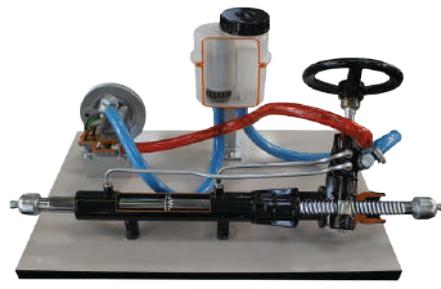
A4

Product number

AE410760M



manual/power steering, hydraulic piston, variable ratio gear, and end/center take-off configurations.



8 VALVE ENGINE WITH TURBO DIESEL CR WITH GEARBOX AND DIFFERENTIAL CUTAWAY

A1

Product number

AE36017E



Sectioned 8-valve, 1900 cm³ turbo diesel engine with 5-speed gearbox and differential, featuring common rail injection (1350 bar), turbocharger, lubrication and cooling systems.





HYBRID SYSTEM PETROL (GASOLINE)/ ELECTRIC SYSTEM CUTAWAY EDUCATIONAL TRAINER

A1**Product number****AE34501WM**

1500 cm³ 4-cylinder DOHC engine with VVT-i, multi-point injection, epicyclic CVT, and Toyota Hybrid System (THS); includes petrol/electric motors, electric rotation, differential, brake, and suspension components for hybrid system training.



PETROL (GASOLINE) ENGINE WITH MPI INJECTION CUTAWAY

A1**Product number****AE45166E**

Volkswagen 4-cylinder petrol engine with OHC, multipoint injection, toothed belt, and 5-speed gearbox.



TOYOTA PETROL (GASOLINE) ENGINE WITH VVT.I INJECTION CUTAWAY MODEL

A1**Product number****AE45181M**

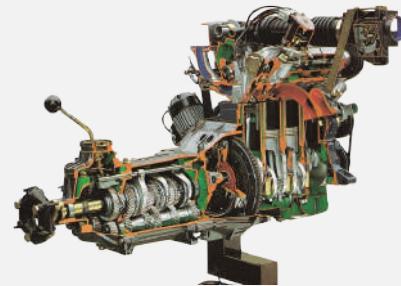
Toyota 4-cylinder petrol engine with DOHC and VVT-i system, featuring multi-point injection and electronically controlled intake valves.



PETROL (GASOLINE) ENGINE WITH GEARBOX CUTAWAY

A1**Product number****AE45152E**

Sectioned 4-cylinder, 2000 cc petrol (gasoline) engine with multipoint injection, 5-speed gearbox with reverse, and front-wheel drive.



6 CYLINDER PETROL (GASOLINE) ENGINE WITH L-JETRONIC INJECTION CUTAWAY

A1**Product number****AE45170E**

BMW 6-cylinder petrol (gasoline) engine with OHC, L-Jetronic injection, and V-arranged valves; includes 5-speed gearbox.



4 CYLINDER RWD DIESEL ENGINE WITH CLUTCH AND GEARBOX CUTAWAY

A1**Product number****AE36071E**

Tekta: 4-stroke, 4-cylinder 1400–1700 cm³ inline diesel engine with indirect injection, Bosch VE pump, OHC, toothed belt, and single-plate clutch.





PETROL (GASOLINE) ENGINE WITH MPI FUEL INJECTION

A1**Product number****AE45212IEE**

4-cylinder, 1245 cc petrol (gasoline) engine with electronic multi-point injection and ignition.



PETROL (GASOLINE) MPI ENGINE CHASSIS WITH ABS AND HYDRAULIC POWER STEERING

Product number**AE45273E**

Front-drive chassis with 1200 cc transverse 4-cylinder petrol engine, MPI, electronic ignition, ECU, hydraulic power steering, catalytic converter with oxygen sensor, 5-speed gearbox with reverse, ABS with four sensors, and McPherson suspension.



4 CYLINDER DIESEL ENGINE CUTAWAY

A1**Product number****AE36065M**

4-stroke diesel engine trainer with 4 in-line cylinders (1400–1700 cm³), Bosch VE rotary pump, indirect injection, OHC with toothed belt, and visible alternator, thermostat, and water cooling.



ENGINE WITH OVERHEAD CAMSHAFT (OHC) AND TOOTHED TIMING BELT

A1**Product number****AE45440M**

4-stroke, 4-cylinder petrol (gasoline) engine cutaway with OHC system. Display valves, camshaft, pistons, crankshaft, lubrication, fuel, and cooling systems.



ENGINE WITH DOUBLE OVERHEAD CAMSHAFT (DOHC) CUTAWAY

A1**Product number****AE45445M**

4-stroke, 4-cylinder DOHC petrol (gasoline) engine cutaway showing valve train, camshaft, pistons, and crankshaft.



4 CYLINDER FWD DIESEL ENGINE WITH CLUTCH AND GEARBOX CUTAWAY

A1**Product number****AE36068E**

4-stroke, 4-cylinder inline diesel engine cutaway with indirect injection, Bosch VE pump, OHC, toothed belt, single-plate clutch, 5-speed gearbox with reverse, differential, alternator, and thermostat.





A1 | Product number
AE36010E



**16 VALVE
CHRYSLER TURBO
DIESEL ENGINE
WITH CR AND
INTERCOOLER**



A1 | Product number
AE36091E



**6 CYLINDERS
TURBO DIESEL
CR ENGINE FOR
IVECO**



A1 | Product number
AE35230



**2 CYLINDERS
PETROL ENGINE
CUTAWAY**



A1 | Product number
AE35195M



**6 V CYLINDERS
PETROL ENGINE
WITH MPI
INJECTION
CUTAWAY**



A1 | Product number
AE37400M



**2 STROKE
MOTORCYCLE
PETROL ENGINE
CUTAWAY**



A1 | Product number
AE35195E OHC

**6 V CYLINDERS
PETROL OHC
ENGINE WITH
MPI INJECTION
CUTAWAY**



A1 | Product number
AE37460M



**4 STROKE PETROL
ENGINE MODEL
WITH ELECTRONIC
INJECTION
MONOJETRONIC
CUTAWAY**



A1 | Product number
AE35195E DOHC

**6 V CYLINDERS
PETROL DOHC
ENGINE WITH
MPI INJECTION
CUTAWAY**



A1 | Product number
AE36077E



**4 CYLINDERS
DIESEL ENGINE
FOR FARM
TRACTOR
CUTAWAY**



A1 | Product number
AE35190E



**6 V CYLINDERS
PETROL ENGINE
CARBURETTOR
CUTAWAY
ELECTRIC**



A1 | Product number
AE37200M



**4 STROKE
PETROL ENGINE
MODEL CUTAWAY**



A1 | Product number
AE35190M



**6V CYLINDERS
PETROL ENGINE
CARBURETTOR
CUTAWAY
MANUAL**

A1 | Product number
AE47950E



**MARINE INBOARD
DIESEL ENGINE
6/8 V-CYLINDERS
WITHOUT
INVERTER**

A1 | Product number
AE47940E/6



**MARINE INBOARD
DIESEL ENGINE
WITH INVERTER
- 4/6 CYLINDERS
CUTAWAY**

A1 | Product number
AE35176E



**BMW 6 CYLINDERS
PETROL ENGINE 24
VALVES WITH MPI
INJECTION AND
TWIN OVERHEAD
CAMSHAFT (DOHC)**

A1 | Product number
AE36081



**TRUCK DIESEL
ENGINE CUTAWAY
TRAINER WITH
PLD INJECTION
SYSTEM
CUTAWAY**

A1 | Product number
AE36065E



**DIESEL ENGINE
FOR SMALL CAR
CUTAWAY**

A1 | Product number
AE38920F



**SINGLE-CYLINDER
4 STROKE DIESEL
ENGINE AIR
COOLED**

Product number
AE37920M



**HYDROJET
ENGINE CUTAWAY**

A1 | Product number
AE36120M



**SINGLE-CYLINDER
4 STROKE
DIESEL ENGINE
AIR COOLED
CUTAWAY**

A1 | Product number
AE37000M



**INDIRECT
INJECTION 4
STROKE DIESEL
ENGINE**

A1 | Product number
AE38910F



**SINGLE-CYLINDER
4 STROKE
PETROL ENGINE
AIR COOLED**

A1 | Product number
AE36078E



**MERCEDES
TURBO DIESEL
ENGINE 16
VALVES +
GEARBOX**

A1 | Product number
AE39220M



**STEAM ENGINE
MODEL**

A1 | Product number
AE35178M



TOYOTA LEXUS
V8 ENGINE
CUTAWAY



L3 | Product number
AE04



ELECTRICAL
VEHICLE
FUNCTIONAL
MODEL



A1 | Product number
AE36075M



TURBO DIESEL
ENGINE WITH
DIRECT FUEL
INJECTION
CUTAWAY



A1 | Product number
AE411063/7M



AUTOMATIC
GEARBOX
7 SPEEDS
+ REVERSE
CUTAWAY



A1 | Product number
AE34801M



16 VALVE
4 CYLINDERS MPI
PETROL(GASO-
LINE) ENGINE
CUTAWAY



A2 | Product number
AE411042M



AUTOMATIC
TRANSMISSION
5 FORWARD
SPEED + REVERSE
CUTAWAY



A1 | Product number
AE37915E



MARINE
OUTBOARD
ENGINE
4-STROKE
CUTAWAY



A2 | Product number
AE411061M



AUTOMATIC
ZF 5HP 4WD
TRANSMISSION
CUTAWAY



A1 | Product number
AE45181E



TOYOTA PETROL
ENGINE WITH
VVT.I INJECTION
CUTAWAY



A2 | Product number
AE411063/6M



AUTOMATIC
GEARBOX
6 SPEEDS
+ REVERSE
CUTAWAY



L3 | Product number
AE35405M



ELECTRIC ENGINE
RENAULT ZOE
CUTAWAY



A2 | Product number
AE411062M



AUTOMATIC
TRANSMISSION
FRONT DRIVE
4 SPEEDS
+ REVERSE
CUTAWAY



A2 | Product number
AE410788M



GEARBOX WITH
DIFFERENTIAL 5
FORWARD SPEED
+ REVERSE +
HYDRAULIC CON-
TROL CLUTCH

A6 | Product number
AE49990E



CONVENTIONAL
COIL IGNITION
SYSTEM –
ELECTRICAL

A2 | Product number
AE411006M



GEARBOX WITH
DIFFERENTIAL
6 FORWARD
SPEEDS +
REVERSE

A1 | Product number
AE410500S



DIRECT
INJECTION
PISTON CUTAWAY

A2 | Product number
AE311067M

A1 | Product number
AE410060M



GETRAG DCT 7
SPEEDS TRANS-
MISSION USED
ON FERRARI/
MERCEDES
VEHICLES



DISTRIBUTOR
CUTAWAY

A6 | Product number
AE410081M



ALTERNATOR
DOUBLE-
FLOW COOLING
CUTAWAY

A7 | Product number
AE413082M



HERMETIC
COMPRESSOR

A1 | Product number
AE410630S



CATALYTIC
SILENCER WITH
LAMBDA PROBE
CUTAWAY



A1 | Product number
AE412999M

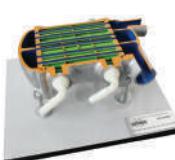


IN-LINE PISTON
PUMP CUTAWAY

A1 | Product number
AE410112S



COMMON RAIL
PIEZO INJECTOR
CUTAWAY

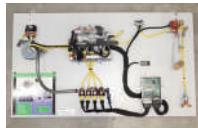


A1 | Product number
AE410440



INTERCOOLER
HEAT
EXCHANGER
CUTAWAY

A1 | Product number
AE410525S



**LPG TIMED
SEQUENTIAL
INJECTION FOR
ELECTRONIC
INJECTION
ENGINES**

A1 | Product number
AE510350S



**PETROL ENGINE
FEEDING CIRCUIT
CUTAWAY**

A1 | Product number
AE410520S



**LPG FUEL
CIRCUIT
CUTAWAY**

A3 | Product number
AE411160S



**PROPELLER
SHAFT WITH
2 TYPES OF
COUPLING
CUTAWAY**

Product number
AE410403S



**LUBRICATION
CIRCUIT WITH
GEAR ROTOR
TYPE PUMP
CUTAWAY**

Product number
AE413071M



**RECIPROCATING
COMPRESSOR
CUTAWAY**

Product number
AE410385S



**MECHANICAL
FUEL PUMP
CUTAWAY**

Product number
AE413075M



**SCREW
COMPRESSOR
CUTAWAY**

Product number
AE413050M



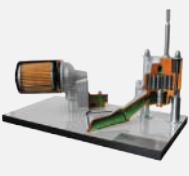
**MULTI-STAGE
CENTRIFUGAL
ELECTROPUMP
CUTAWAY**

Product number
AE413000S



**SERIES OF 5
WATER PUMP
ROTORS**

A1 | Product number
AE410400M



**OIL PUMP FILTER
CUTAWAY**

A2 | Product number
AE411110M



**SINGLE DISC
CLUTCH COIL
SPRING MODEL**



A1 | Product number
AE49901E

**SINGLE-POINT
INJECTION
SYSTEM – SPI**



Product number
AE410655M



**VANE
COMPRESSOR
CUTAWAY**



A1 | Product number
AE410320S



**SINGLE-BODY
CARBURETTOR**



A1 | Product number
AE410460M



**VARIABLE
GEOMETRY
TURBO-
SUPERCHARGER
CUTAWAY**



A1 | Product number
AE410450M



**TURBO-
INTERCOOLER
CUTAWAY**



A1 | Product number
AE410310S



**VERTICAL TWIN
CARBURETTOR
CUTAWAY**



Product number
AE39211M



**TURBO JET
ENGINE CUTAWAY**



A1 | Product number
AE37930M



**OUTBOARD
MARINE
REVERSER
CUTAWAY**



A1 | Product number
AE410453S



**TURBOCHARGER
WITH VARIABLE
GEOMETRY
HOLSET FOR
TRUCKS**



A6 | Product number
AE410070M



**STARTER MOTOR
FOR CARS
CUTAWAY**



A1 | Product number
AE310368S



**TWIN VALVE OHC
ENGINE HEAD
CUTAWAY**



A1 | Product number
AE410390M



**WATER PUMP
WITH RADIATOR
CUTAWAY**

A4 | Product number
AE410700M



STEERING
BOX WITH
HOURGLASS
SCREW



A1 | Product number
AE35222IEE



FIAT PETROL
ENGINE WITH
MPI INJECTION
+ GEARBOX
CUTAWAY



A4 | Product number
AE411206S



MULTILINK
SUSPENSION
TRAINING MODEL



Product number
AE36175E



FIAT TURBO
DIESEL CHASSIS
WITH FRONT
DRIVE AND
WORKING LIGHT
SYSTEM



A3 | Product number
AE411150M



OVERDRIVE
CUTAWAY



Product number
AE36140E



FIAT TURBO
DIESEL REAR
WHEEL DRIVE
CHASSIS



A3 | Product number
AE411260M



SELF-LOCKING
HYPOID
DIFFERENTIAL
CUTAWAY



L3 | Product number
AE35272E



PETROL MPI
ENGINE AND
CHASSIS WITH
ABS



A3 | Product number
AE411199M



REAR AXLE
HEAVY TRUCK
WITHOUT
LOCKING
DIFFERENTIAL
CUTAWAY



A1 | Product number
AE36070E



REAR DRIVE
TURBO DIESEL
ENGINE WITH
CLUTCH
GEARBOX



A1 | Product number
AE35220CE



FIAT PETROL
ENGINE WITH
CARBURETTOR
+ GEARBOX
CUTAWAY



Product number
AE36150E



DIESEL ENGINE
WITH REAR
WHEEL DRIVE
CHASSIS
CUTAWAY





Product number
AE36170E



**DIESEL
TURBOCHARGED
ENGINE WITH REAR
WHEEL DRIVE
CHASSIS AND
LIGHTS SYSTEM**



A5 **Product number**
AE312300M



**VACUUM
SERVOBRAKE
CUTAWAY**



Product number
AE36176E



**FIAT TURBO
DIESEL CHASSIS
WITH FRONT
DRIVE CUTAWAY**



A6 **Product number**
AE410041



**12 VOLT AGM
BATTERY
CUTAWAY**



A5 **Product number**
AE412230



**ABS BRAKE
BOARD CUTAWAY**



Product number
AELK9155

**AUTOMOTIVE
OSCILLOSCOPE
TRAINER**



A5 **Product number**
AE312000M



**DISC BRAKE
CUTAWAY**



Product number
AELK4500CUS

**AUTOMOTIVE
COMBINATION
KIT**



A5 **Product number**
AE412170S



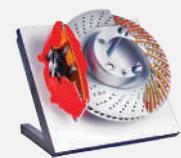
**MOTOR/TRAILER
AIR BRAKING
SYSTEM WITH
DOUBLE SPRING
BRAKING UNIT
EDUCATIONAL
TRAINER**



A3 **Product number**
AE411281S



**CROWN
AND PINION
DIFFERENTIAL
GROUP CUTAWAY**



A5 **Product number**
AE412040S



**SELF-
VENTILATING
BRAKE
APPARATUS WITH
4 SMALL PISTONS
CUTAWAY**



Product number
AE513163S



**CUTAWAY
BALANCING
VALVE CUTAWAY**



Product number
AE513128S



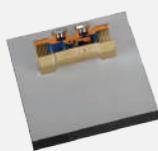
**CUTAWAY BALL
VALVE WITH
DRAIN OFF/COCK**



Product number
AE513120S



**CUTAWAY
HYDRAULIC/
PNEUMATIC BALL
VALVE**



Product number
AE513142S



**CUTAWAY CHECK
VALVE WITH
DRAIN**



Product number
AE513138S



**CUTAWAY LINE
STRAINER VALVE**



Product number
AE513148S



**CUTAWAY
CIRCULATION
PUMP**



Product number
AE513161S



**CUTAWAY
NEEDLE TWIN
DIRECTIONAL
FLOW VALVE**



Product number
AE513136S



**CUTAWAY
COMPRESSION
VALVE**



Product number
AE513144S



**CUTAWAY
PRESSURE
VALVE REDUCER
WITH FEMALE
CONNECTION**



Product number
AE513152S



CUTAWAY FILTER



Product number
AE513162S



**CUTAWAY SAFETY
VALVE**



Product number
AE513134S



**CUTAWAY GATE
VALVE**



Product number
AE513160S



**CUTAWAY
SOLENOID
MEMBRANE
ELECTRO VALVE**

Product number
AE513130S



CUTAWAY
STANDARD BORE
BALL VALVE



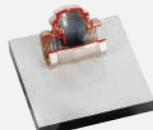
Product number
AE513146S



CUTAWAY
THROTTLE VALVE



Product number
AE513140S



CUTAWAY
STANDARD
CLAPET FULL
NON-RETURN
VALVE



Product number
AE513124S



CUTAWAY TWO-
WAY VALVE WITH
ELECTRIC MOTOR



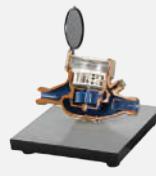
Product number
AE513122S



CUTAWAY STEAM
GATE VALVE



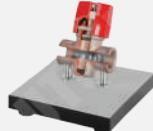
Product number
AE513150S



CUTAWAY WATER
METER



Product number
AE513132S



CUTAWAY
STRAIGHT-WAY
PLUG VALVE



Product number
AEBL0505



E-BLOCKS2 PIC
PROGRAMMER
AND COMBO
BOARD

Product number
AE513126S



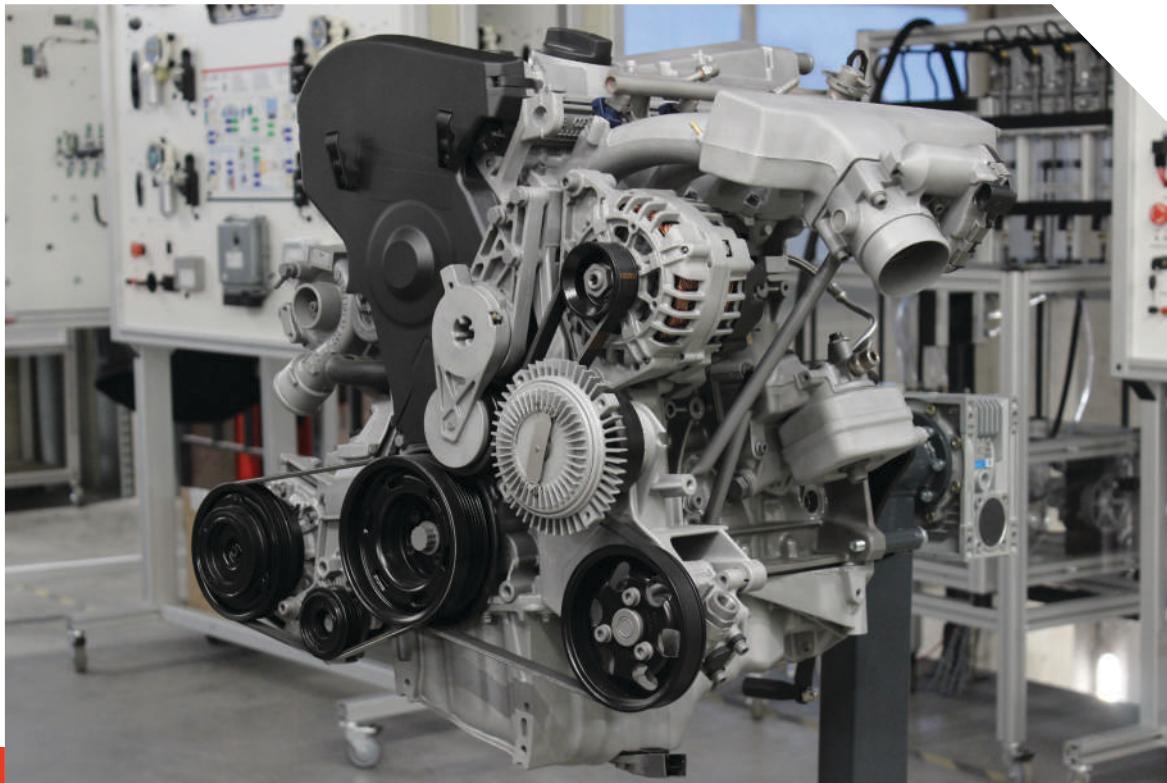
CUTAWAY THREE-
WAY BALL VALVE



Product number
AEBL0524



PIC MICROCON-
TROLLER SYSTEM
DEVELOPMENT
KIT (COMBO)



DISASSEMBLING AND ASSEMBLING MODELS





CATERPILLAR 3304 DIESEL ENGINE FOR DISASSEMBLY AND ASSEMBLY

A1

Product number

VIVV02-CAT



Caterpillar 3304 diesel industrial engine with displacement of 425 cu in (7.0 L) designed for practical experience in disassembly and assembly of engine. This in-line, 4-stroke-cycle diesel engine includes a turbocharger, direct injection system, and robust construction for long-lasting training applications. It is mounted on a stable, rotating stand, enabling 360-degree access for practical vocational training.



Features

- Full Caterpillar 3304 7.0L 4-cylinder 4-stroke diesel industrial engine for disassembly and assembly.
- Turbocharged with direct injection for real-world industrial application training.
- Mounted on a 360-degree rotating stand for ease of access.

Value for Students

- Practical skills in engine disassembly, assembly, and maintenance procedures essential for industrial diesel engines.
- Experience with components such as the turbocharger, direct injection system, and lubrication system.
- Understand key parameters like bore, stroke, displacement, and combustion process in direct injection engines.
- Analyze equipment such as alternators, tachometers, and hydraulic pumps, broadening technical expertise.
- Learn liquid capacity systems, including cooling and lubrication, critical for industrial engine operation.

Specifications

- Dimensions: 1275 x 1011 x 754 mm (50.2 x 39.8 x 29.7 inch)
- Weight: approx. 750 kg (1,655 lb)
- Product number: VIVV02-CAT





PETROL FSI ENGINE FOR DISASSEMBLING AND ASSEMBLING

A1

Product number

VIVV01-FSI



Petrol engine training model features an FSI (fuel-stratified injection) engine mounted on a 360° manually rotating stand with worm and wheel gearboxes. Designed for disassembly and reassembly, it offers hands-on access to all engine components, focusing on mechanical systems for advanced automotive training.



TURBO DIESEL DOHC ENGINE IN THE SPLIT VERSION

A1

Product number

IVD-SPLIT



6-cylinder in-line turbo diesel engine with DOHC and chain drive; all cylinders and engine components are fully exposed for detailed analysis.



DSG GEARBOX EDUCATIONAL TRAINER FOR DISASSEMBLING AND ASSEMBLING

A2

Product number

GDIVV1-DSG



DSG transmission trainer for disassembly and assembly, featuring dry double clutch, 7 forward gears, and 1 reverse gear.



TURBO DIESEL ENGINE WITH VE/ER PUMP EDUCATIONAL TRAINER

A1

Product number

VIVI01-VETDI



Turbo diesel engine for assembly/disassembly with VE/ER fuel pump, full timing and auxiliary belt system.



GEARBOXES FOR DISASSEMBLING AND ASSEMBLING

A2

Product number

GDIVV01



Gearboxes for disassembly and assembly, featuring any chosen type of gearbox (manual, automatic, DSG, Multitronic, etc.).



GEARBOXE CVT FOR DISASSEMBLING AND ASSEMBLING

A2

Product number

GDVV01-CVT



CVT Multitronic gearbox trainer for disassembly and assembly.





PETROL (GASOLINE) MPI ENGINE FOR DISASSEMBLING AND ASSEMBLING

A1**Product number****VIVV01-ADR**

Engine with MPI system for disassembly and assembly; includes intake manifold, throttle body, alternator, and full timing and auxiliary belts.



PETROL (GASOLINE) MPI TURBO ENGINE FOR DISASSEMBLING AND ASSEMBLING

A1**Product number****VIVV01-ADRT**

MPI turbocharged petrol (gasoline) engine trainer for disassembly and assembly.



DIESEL CR TURBO ENGINE EDUCATIONAL TRAINER

A1**Product number****VIVV01-RHX**

CR-type turbo diesel engine trainer for disassembly and assembly, with complete timing and auxiliary belt system.



ENGINES FOR DISASSEMBLING AND ASSEMBLING

A1**Product number****VIVV01**

Engine trainer for disassembly and assembly with customer-selected petrol (gasoline) or diesel engine (MPI, FSI, GDI, CR, or VE systems).



PETROL (GASOLINE) GDI ENGINE FOR DISASSEMBLING AND ASSEMBLING

A1**Product number****VIVV01-GDI**

GDI petrol (gasoline) engine trainer for disassembly and assembly.



TURBO DIESEL ENGINE WITH CR PUMP EDUCATIONAL TRAINER

A1**Product number****VIVI01-CRTDI**

Turbo diesel engine for disassembly and assembly training, featuring CR fuel pump and complete timing and auxiliary belt systems.





SERVICE EQUIPMENT





DIAGNOSTIC SCAN TOOL FOXWELL

Product number
NT680

Diagnostic scanner for all systems of all car brands with special functions. The scan tool is designed for professionals and enthusiasts alike to diagnose all system errors for major American, Asian and European car brands. This device will allow auto mechanics to perform diagnostics accurately and easily.



DIAGNOSTIC SCAN TOOL FOXWELL

Product number
NT680PRO

Diagnostic scanner for all systems of all car brands with special functions.



DIAGNOSTIC SCAN TOOL ICON VCI AUTOCOM

Product number
W072063300

The ICON diagnostic tool is a powerful and reliable solution for comprehensive vehicle diagnostics, designed for both cars and trucks, including electric and hybrid models. It features AutoVIN for automatic vehicle identification, Quick Connect Bluetooth for seamless connectivity, and integrated CAN-FD and DoIP for advanced communication with modern vehicles. With extensive software coverage, including 35,000 system selections for cars and 18,000 for trucks, it allows precise diagnostics and system updates.

*License should be bought separately.



DIAGNOSTIC SCAN TOOL TEXA NAVIGATOR TXT MULTIHUB

Product number
D155A0

Advanced multi-brand diagnostic tool designed for comprehensive vehicle diagnostics, covering traditional, hybrid, and electric vehicles. It supports multiple communication protocols, including CAN, DoIP, and Pass-Thru, making it versatile for workshops handling various vehicle types. The robust design ensures reliability in professional environments, while its wireless functionality allows seamless integration with TEXA's diagnostic software. Ideal for automotive professionals, it delivers fast, precise diagnostics, streamlining maintenance and repair processes across a wide range of vehicle systems.

* License should be bought separately.





TWO POST LIFT 4.0T



Product number

AQ42E

High-capacity, electro-hydraulic lift with a 4000 kg lifting capability. It features electric lock release, electromagnetic fixators, and a two-cylinder system for smooth, stable operation. Adjustable three-position arms accommodate various vehicle types, making it suitable for automotive training and workshop environments.

Specifications

- Lifting capacity: 4000 kg
- Electric lock release
- Three-position arms: short 684-1025 mm, long 700-1400 mm
- Lifting height: 105-1800 mm
- Overall height: 2826 mm
- Width between columns: 2820 mm
- Passage width: 2576 mm
- Overall width: 3420 mm
- Motor power: 2.2 kW
- Two-column electro-hydraulic system
- Two-cylinder lifting mechanism
- CE declaration of conformity
- Suitable for passenger cars, commercial vehicles, 4x4, and "all-road" vehicles



TWO POST LIFT, 4.0T

Product number
AQ41M

The 4.0T AQ41M is a two post lift with a 4000 kg capacity, featuring a mechanical safety locking mechanism and a two-cylinder system for stable, smooth lifting and lowering. Equipped with adjustable three-position arms, it accommodates a wide range of vehicle types. The design includes strong cables to ensure level lifting and a spacious layout for comfortable vehicle access, making it ideal for automotive maintenance and training environments.



Specifications

- Lifting capacity: 4000 kg
- Mechanical safety locking mechanism
- Arm lengths: 700-1400 mm (short and long, three positions)
- Lifting height: 105-1900 mm
- Overall height: 2826 mm
- Width between columns: 2820 mm
- Overall width: 3420 mm
- Motor power: 2.2 kW
- Power supply: 380 V
- Two-cylinder lifting system
- CE Declaration of Conformity
- Suitable for passenger cars, commercial vehicles, 4x4, and all-road vehicles



FOUR POST LIFT 5.0M. 5.0T

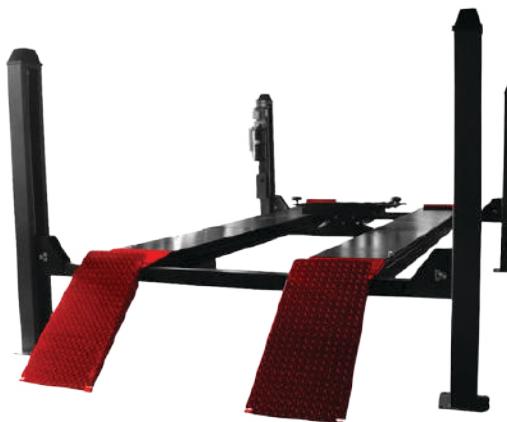
Product number

AQ5050M

The AQ5050M is a four post lift with a 5000 kg capacity, designed for precise wheel alignment. It features adjustable runways, a jacking beam, and a 2.2 kW motor, providing reliable lifting up to 1800 mm. Suitable for various vehicle types, it ensures stable and efficient alignment operations.

Specifications

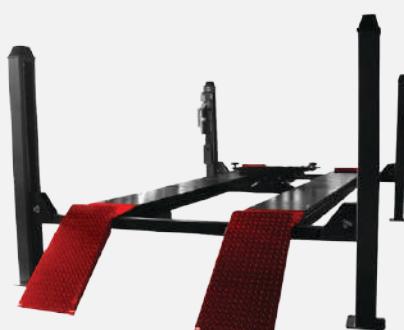
- Lifting capacity (kg) Max 5000
- Lifting time range (S) 40 - 50
- Power supply (V) 380
- Power rate (KW) 2.2
- Lifting height (mm) Max-1800 Min-245
- Runway (mm) Width-550 Length-5000
- Distance between runway 880-1200mm



FOUR POST LIFT 5.5M. 5.0T

Product number
AQ5550M

Four post lift with a 5500 kg capacity, tailored for wheel alignment tasks. It features a 2.2 kW motor, adjustable runways, and a jacking beam, allowing for efficient lifting up to 1800 mm. Ideal for diverse vehicle alignment and maintenance applications.



Specifications

- Lifting capacity (kg) Max 5500 (12125 lbs)
- Lifting time range (S) 40 - 50
- Power supply (V) 380
- Power rate (KW) 2.2
- Lifting height (mm) Max-1800 (70.87 in) Min-245 (9.65 in)
- Runway (mm) Width-550 (21.65 in) Length-5500 (216.54 in)
- Distance between runway 880-1200 mm (34.65-47.24 in)



DOUBLE SCISSOR INGROUND LIFT 3.5T

Product number
AQL3500C

The AQL3500C is an inground double scissor lift with a 3500 kg lifting capacity, designed for compact and efficient vehicle lifting. It features a maximum lifting height of 2150 mm, adjustable platform lengths, and stable operation with a 2.2 kW motor, making it ideal for space-saving automotive service and training applications.



DOUBLE SCISSOR LIFT 3.0T

Product number
AQL3500

On-ground double scissor lift with a 3000 kg capacity, featuring a maximum lifting height of 1800 mm. It has adjustable platform lengths, quick lifting time, and stable operation, making it ideal for automotive service and maintenance tasks.



LOW-RISE SCISSOR LIFT WITH AUTOMATIC RELEASE SAFETY LOCK

Product number
AQ3000ESA

Low-rise scissor lift with a 3000 kg capacity, offering a lifting height of 1000 mm. It features an electrical release of safety latches, eliminating the need for air supply, making it efficient for quick maintenance and repair tasks.



PROPELLION SYSTEM LIFT

Product number
AQVL1.2

Propulsion system lift with a 1200 kg capacity, featuring adjustable pads and a lifting height range from 660 mm to 1915 mm. It is equipped with a 0.75 kW motor, designed for efficient handling of propulsion systems in maintenance and training settings.





AUTOMATIC TILT-BACK CAR TYRE CHANGER

Product number

AQ808B+B350

Automatic tilt-back tyre changer with outside clamping range of 11"-23" and inside clamping range of 13"-25". It handles wheels up to 1040 mm in diameter, operates at 8-10 bar pressure, and features a 0.75 kW motor, making it ideal for efficient tyre changing in automotive workshops.



AUTOMATIC TILT-BACK CAR TYRE CHANGER

Product number

AQ908B+B350+L

Automatic tilt-back tyre changer without a turntable, featuring an outside clamping range of 12"-26", accommodating wheels up to 1180 mm in diameter and 450 mm in width. It operates at 8-10 bar pressure with a 0.75 kW motor, designed for efficient tyre servicing in professional workshops.



SEMI-AUTOMATIC CAR WHEEL BALANCER

Product number

AQ60A

Semi-automatic wheel balancer with a rim diameter range of 10" - 28" and a maximum tire diameter of 1000 mm. It balances tires up to 70 kg with high accuracy of $\pm 1g$, operating at 200 rpm, making it ideal for precise wheel balancing in automotive service environments.



LCD SCREEN CAR WHEEL BALANCER

Product number

AQ80C

Car wheel balancer with an LCD screen, supporting rim diameters of 8" - 30" and a maximum tire diameter of 1000 mm. It balances tires up to 70 kg with a balance accuracy of $\pm 1g$, operating at 200 rpm, providing precise and efficient wheel balancing for professional use.



FILLED TOOL TROLLEY

Product number

AQT7134

7-drawer tool trolley equipped with 134 pieces of tools. It features ball-bearing slides for smooth, full-extension drawers, an automatic locking system, and a sturdy plastic worktop. The trolley includes 4 casters, with one brake-equipped, ensuring stability and mobility. Ideal for organized, secure tool storage and easy access in professional workshops.



GARAGE STORAGE SYSTEMS 3 PARTS

Product number

AQ01BK

Garage storage system includes a high cabinet, 2-door base cabinet, 4-drawer cabinet, 2-door wall cabinets, wooden worktop, panel boards, and hooks. Made of solid steel with a powder-coated finish, it features ergonomic handles, secure cylinder locks, and strong drawers on bearing rails, providing a durable and organized workspace without needing wall attachment.



OIL CHANGER

Product number

AQOD90

Waste oil drainer and changer with a 90-liter tank, featuring corrosion-resistant galvanized tubing, oil absorption control, and a safety valve. It offers a suction speed of 1.5-2 lpm, suitable for oil temperatures of 70-80°C, and includes adjustable collection bowls for efficient oil removal.



GARAGE STORAGE SYSTEM 4 PARTS

Product number

AQ02BK

Garage storage system includes a high cabinet, base cabinet, 4-drawer cabinet, roller cabinet, wall cabinets, wooden worktop, panelboards, and hooks. Made from solid steel with powder coating, it features ergonomic handles, secure cylinder locks, and durable drawers on bearing rails. It offers a freestanding, organized workspace ideal for any garage setup.



AIR COMPRESSOR

Product number

AQC0.6

Belt-type air compressor with a 4.0 kW motor, 600 L/min capacity, and 300-liter tank. It operates at 0.8 MPa with a max pressure of 1.0 MPa, featuring excellent heat dissipation, high resistance, and a safety valve at 0.9 MPa, ideal for demanding workshop environments.



ANTI-IMPACT WORK LIGHT LED

Product number

AQ3001

Anti-impact LED work light featuring a super bright SMD LED flashlight (130 lumens) and COB LED floodlight (260/620 lumens). It has a high-quality 3.7V 2600mAh Li-ion battery with up to 10h 30mins of flashlight runtime and IP54 weatherproof rating, making it ideal for tough working conditions.





INFORMATION OF THE COMPANY

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