



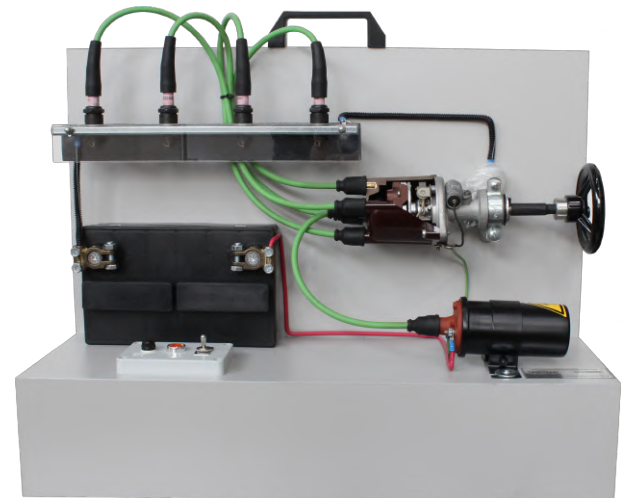
ELECTRONIC IGNITION SYSTEM EDUCATIONAL TRAINER

A1

Product number
AE410010

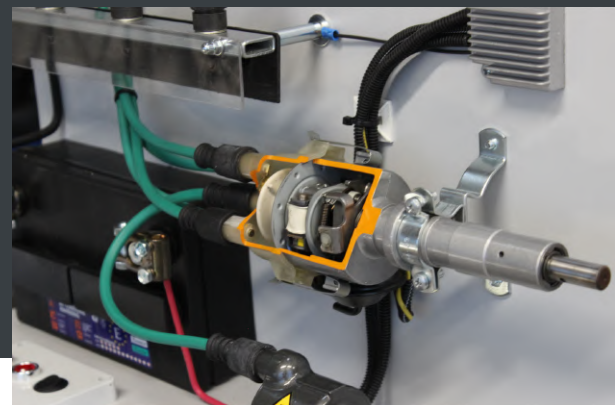


Educational Trainer is designed to demonstrate the principles of a breakerless ignition system for a four-cylinder, four-stroke engine. Equipped with OEM vehicle components such as spark plugs, ignition distributor, and ignition coil, the trainer features a magnetic pulser integrated within the distributor to control coil current conduction. Key specifications include a spark risetime of $45 \mu\text{s}$, a duration of 2 ms, and secondary high voltage of 28 kV. The system operates manually, providing hands-on learning while maintaining a constant spark energy, even under low battery voltage conditions.



Features

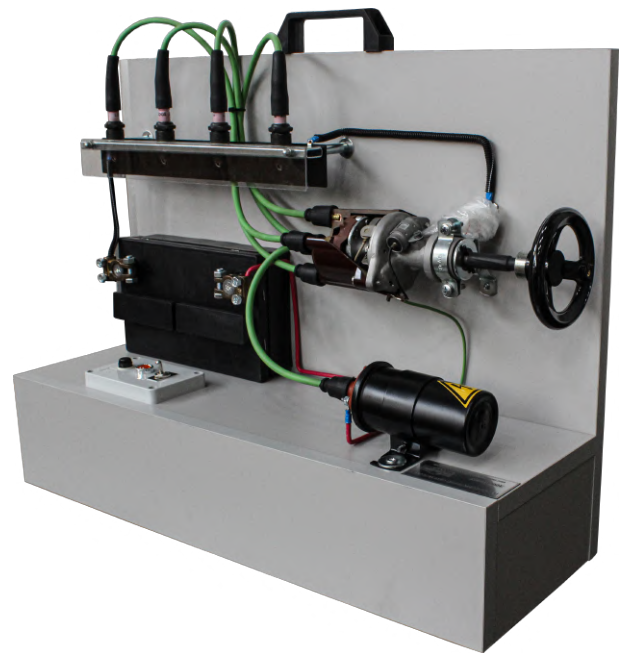
- Breakerless electronic ignition system for four-cylinder, four-stroke engines.
- Components include spark plugs, ignition distributor, coil, and ignition wiring, all mounted on a visible plastic-plated wooden base.
- Manual operation to demonstrate system functionality in a straightforward manner.
- Integrated magnetic pulser replaces the traditional mechanical breaker, offering enhanced control of coil current conduction time.
- The didactic panel allows static display and explanation of system components.
- Constant spark energy achieved even with reduced battery voltage.





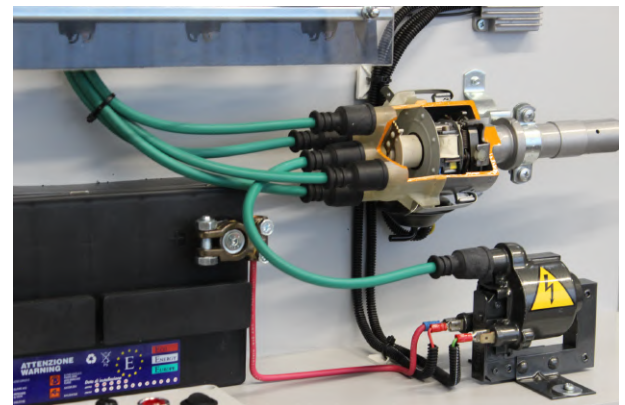
Value for Students

- Learn the principles of breakerless electronic ignition systems, including the functionality of a magnetic pulser integrated within the ignition distributor.
- Understand the process of coil current conduction and ignition phase signal processing, controlled electronically, independent of mechanical limitations.
- Gain experience working with OEM components such as spark plugs, distributor, ignition coil, and ignition wiring.
- Study the dynamics of spark energy control even under low battery conditions, a critical concept for automotive repair.
- Hands-on experience with primary coil current control and analysis of how pulse signals adjust based on engine RPM.
- Perform diagnostics on the system's components, such as the electromagnetic pulse generator and centrifugal mechanical advance.
- Learn critical spark parameters: risetime of 45 μ s, spark duration of 2 ms, and secondary high voltage of 28 kV.



Value for Instructors

- Offers an authentic demonstration of breakerless ignition systems using OEM vehicle components, giving students practical automotive skills.
- Simple manual operation provides a clear understanding of ignition principles without complex automation.
- Allows for hands-on learning, helping students recognize the nuances of the ignition phase signal, coil current conduction, and spark energy management.
- The statically displayed system on a didactic panel facilitates easy breakdown and discussion of key ignition system concepts.
- Durable and reliable build ensures long-lasting use for repeated classroom demonstrations and training sessions.



Specifications

- Dimensions: 700 x 250 x 550 mm (27.56 in x 9.84 in x 21.65 in)
- Weight: 10 kg (22 lb)
- Product number: AE410010