



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

A1

Product number

AE34500M



A highly detailed instructional tool featuring a 1500 cc, 4-cylinder engine with a DOHC (Dual Overhead Camshaft) and VVT-i (Variable Valve Timing with intelligence) system. This model includes multi-point electronic fuel injection, an epicyclic engine, and a continuously variable transmission (CVT) integrated with Toyota's Hybrid System (THS), comprising both gasoline and electric motors. The trainer allows manual rotation of the engine and generator, enabling hands-on learning of hybrid technology, energy recovery, and efficient power transfer through its advanced transmission components and differential group.



## Features

- Toyota Hybrid System (THS): Integrated gasoline engine and electric motors with energy recovery and multiple operation modes.
- 4-Cylinder Engine: 1500 cc displacement, DOHC overhead camshaft, 4 valves per cylinder, with VVT-i and multi-point electronic fuel injection.
- Manual Operation: The engine and generator can be rotated manually, allowing for detailed study and analysis.
- Epicyclic Engine and Transmission: Features a CVT, gears, and a differential group for comprehensive transmission training.
- Exhaust System: Includes an exhaust manifold with a Lambda sensor for studying emissions and exhaust control.





## Value for instructors

- Fully functional cutaway model to demonstrate the intricate workings of hybrid technology, from energy recovery and storage to the interaction between gasoline and electric power sources.
- Provide easy, safe, and effective training using OEM components to offer a realistic experience similar to car repair scenarios.
- The ability to manually operate the engine and generator offers a tangible, interactive learning experience, fostering deeper student engagement and understanding.
- Equipped with a nomenclature panel, the trainer allows for easy identification of each component, streamlining the teaching process and helping students quickly grasp complex concepts.
- Mounted on a sturdy stand with wheels, the trainer is easily movable within the classroom, making it accessible for demonstrations and group learning sessions.



## Value for students

- Gain a deep understanding of the Toyota Hybrid System (THS), which integrates a gasoline engine and electric motors. Learn about the energy recovery process during braking and the various operational modes that enhance efficiency.
- Study the 4-cylinder, 1500 cc engine with DOHC, VVT-i, and multi-point electronic injection. Students can manually rotate the engine and generator, enabling close examination of each component's function.
- Develop expertise in diagnosing and troubleshooting hybrid systems by exploring the integration of the internal combustion engine with the electric motor, generator, and transmission components.
- Understand the working principles of the epicyclic engine, CVT, and differential group. Analyze how these components interact to efficiently transfer power in various driving conditions.



## Specifications

- Dimensions: 51.18 in x 35.43 in x 61.02 in
- Weight: 418 lb
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