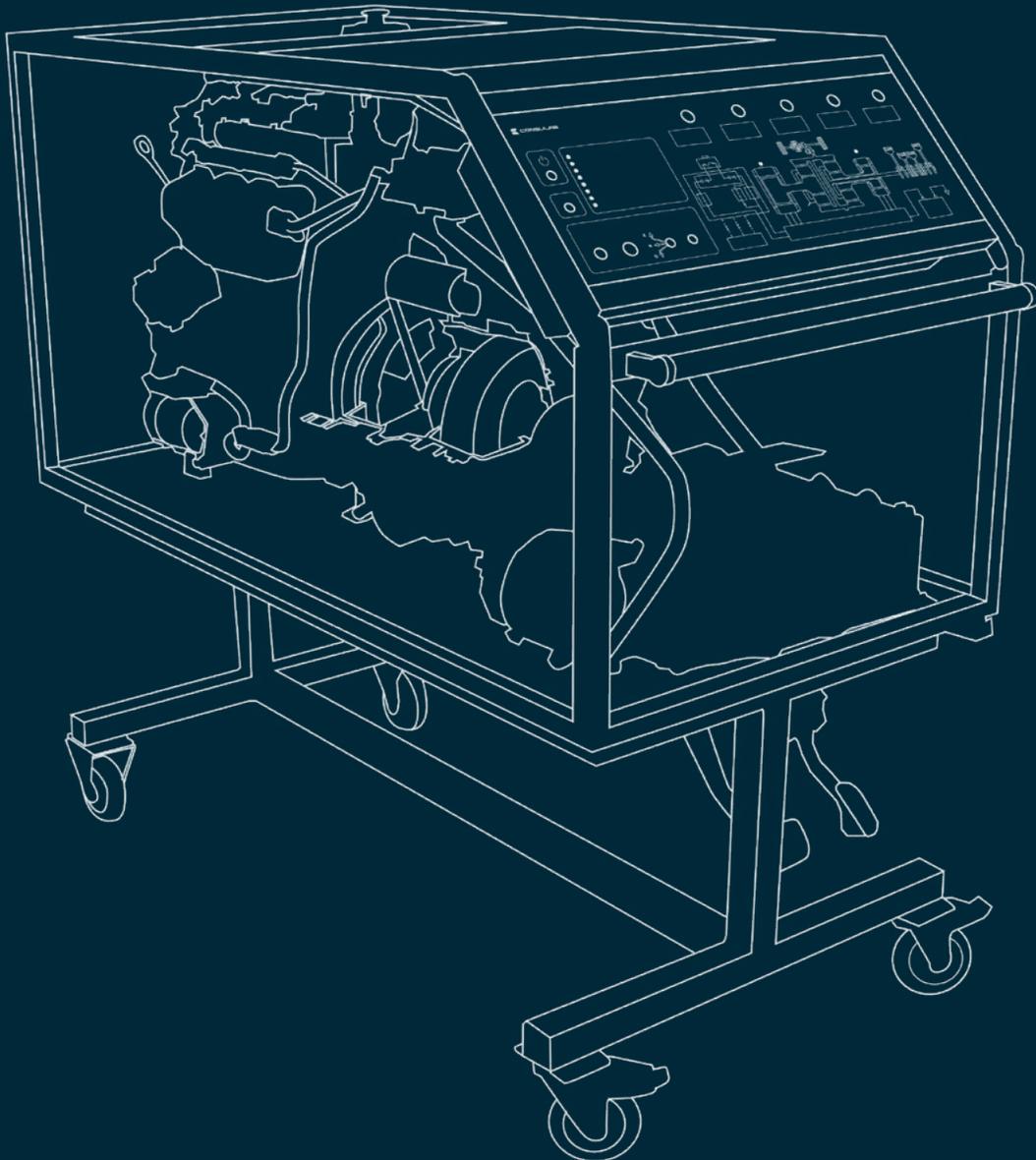




# Cutaway Toyota Prius Hybrid Drive Train



**GENERAL  
DESCRIPTION**

The EC-140H Cutaway Toyota Prius Hybrid Drive Train is a training system designed specifically for teaching how a typical hybrid drive train operates. The trainer consists of all cutaway drive train components from a Toyota Hybrid Synergy Drive system including:

- ICE (internal combustion engine)
- Torque damper assembly
- MG1 (motor/generator # 1)
- Planetary gearset
- MG2 (motor/generator # 2)
- Control Panel
- Accelerator Pedal
- Brake Pedal
- Transaxle
- Inverter
- HV (high voltage) battery (non-functional)

Scan this QR code if you wish to know more about this product :



The ICE, MG1, MG2 and differential output/drive wheels are driven with external electric motors via connecting chains. This design allows the demonstration of eight of the possible hybrid operating modes. All components are cutaway to allow clear student visual learning.



**EDUCATIONAL  
ADVANTAGES**

- Clear cutaways allow clear student visualization of hybrid drive train components.
- Students can observe the eight basic operational modes of a typical hybrid drive train.
- Completely safe. No high voltages normally associated with hybrids are used.
- Clear protective plexiglass enclosure for all rotating components.
- Intuitive control panel/dashboard showing power flow, component speed, and direction of rotation.
- Three individual motors for ICE, MG1 and MG2.
- Allows students to observe the continually variable ratio function using a simple planetary gear set (power split device) and varying input speeds.

**APPLICATIONS**

- 2010-2015 Toyota Prius.
- 1.8L 2ZR-FXE (4-cylinder with VVT-i Atkinson cycle with Hybrid Synergy Drive).

**STANDARD EQUIPMENT  
AND FEATURES**

- OEM components, wiring, connectors and wire colors
- 120 VAC 60 Hz Power Supply with master ON/OFF switch used to power the EC-140H Hybrid trainer. Includes 1.5A protection fuse
- Mobile stand constructed of 2" (5cm) tubular steel equipped with four 5" (12.7cm) phenol casters (2-fixed and 2-swivel w/locks).
- Control panel
- Driving modes including:
  - Reverse
  - Engine start
  - Low speed and low acceleration (stealth)
  - Normal drive (cruise)
  - High speed and full-throttle acceleration
  - High speed energy recirculation
  - Coasting
  - Regenerative braking



**STANDARD EQUIPMENT AND FEATURES (FOLLOWING)**

- Drive train information section including a battery charging lamp, a MG2 regeneration lamp, a steady state lamp, a MG1 regeneration lamp, an engine cold temperature lamp, a battery voltage display, a MG2 RPM display, a vehicle speed display, a MG1 RPM display, an engine RPM display, two opposite rotation LED indicators, two RPM x10 LED indicators, two system main relay control LED indicators and a drive train schematic diagram.
- Accelerator pedal
- Brake pedal
- Emergency panic disconnect button

**TECHNICAL INFORMATION**

Dimensions :

- 30.5 in (77,5 cm) x 60 in (152,4 cm) x 55 in (140 cm) (without packaging)
- 36 in (91,5 cm) x 64 in (163 cm) x 78 in (198 cm) (with packaging)

Poids:

- 720 lbs / 326.5 kg (without packaging)
- 847 lbs / 385 kg (with packaging)

