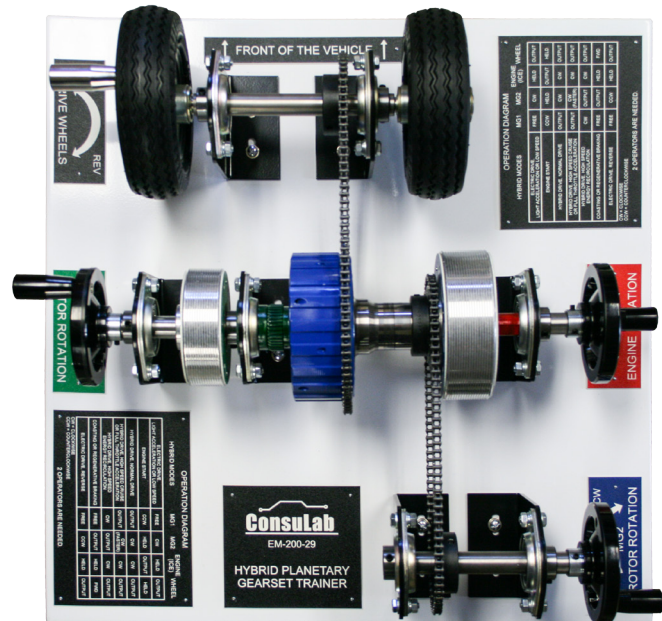
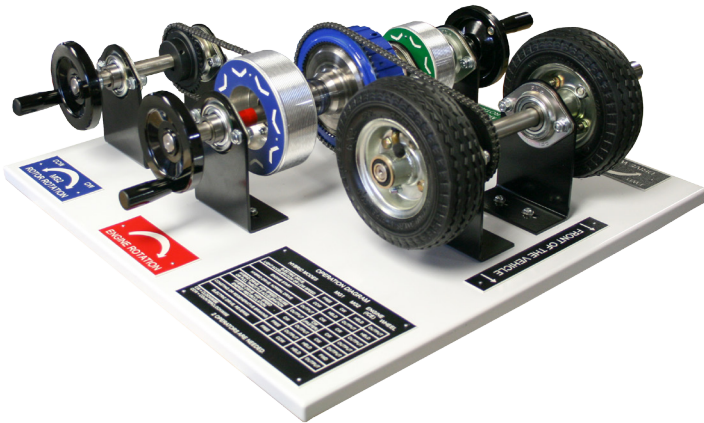


## HYBRID PLANETARY GEARSET TRAINER



The EM-200-29 Hybrid Planetary Gearset Trainer is designed to help instructors teach and students to understand the somewhat complex operation of a typical hybrid vehicle drivetrain. This hybrid planetary drivetrain trainer is based on the Toyota Prius hybrid system and focuses on the planetary gearset system, also known as the “Power-Split device”.

The EM-200-29 trainer allows students to manually hold and/or drive various drivetrain system elements to visualize all available operational modes. The students can see the impact of the different combinations of elements either being held or driven and what effects that they have on the output speed and torque.

### Educational Advantages

- Clearly demonstrates the operation of ICE, MG1, MG2 and Drive wheels in all vehicle modes.
- Students are required to be "part of the driveline operation" by turning hand cranks or holding devices which increases their engagement and involvement.
- Trainer provides a significant educational tool that clearly demonstrates the complex operation of a hybrid drivetrain using a power split device.
- Makes all major hybrid drivetrain components clearly visible which are normally not accessible in the vehicle.

### Features

- The EM-200-29 trainer is designed to have students manually rotate, hold or release each component using hand cranks. An OPERATION DIAGRAM on the trainer gives instructions as to the status of each component during operational modes of:
  - ELECTRIC DRIVE – Light acceleration & low speed (Stealth mode)
  - ENGINE START –
  - HYBRID DRIVE – Normal driving
  - HYBRID DRIVE – High speed cruise or full throttle acceleration
  - HYBRID DRIVE – High speed energy recirculation
  - COASTING & REGENERATIVE BRAKING
  - ELECTRIC DRIVE REVERSE
- Clearly demonstrates the operation of ICE, MG1, MG2 and Drive wheels in all vehicle modes.
- The OPERATION DIAGRAM identifies which component is held, driven and/or spins freely in each mode. Students either hold or turn hand cranks to demonstrate each mode. This allows full visualization of each mode for better understanding of system operation. Each of the four components will react exactly as it does in the vehicle including changes in the direction of rotation of MG1. Diagnostic scenarios can also be created for example by showing what would happen if MG1 fails. In some modes, two students are required to operate all components on the trainer.
- Clear representation of driveline components including ICE, MG1, MG2 and Drive wheels.
- Focuses on the planetary gearset system, also known as the "Power-Split device".
- Hand cranks and drums that are used by students to either drive or hold components to demonstrate each operational mode.

### Technical Information

Dimensions: 22 x 22 x 9 in (55.9 x 55.9 x 22.8 cm) / 24 x 24 x 13 in (60.9 x 60.9 x 33 cm) (w/packaging)

Weight: 45 lb (20.5 kg) / 53 lb (24.1 kg) (w/packaging)



#### REPRESENTED BY:

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