

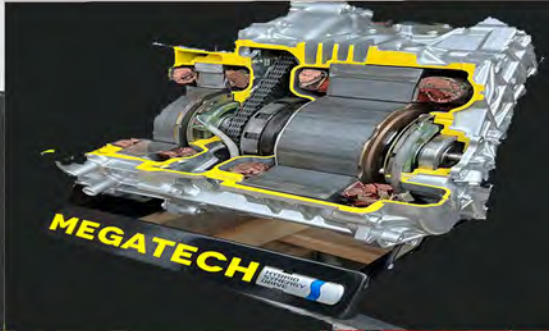


# MEGATECH

*A World Leader in Transportation*



## 2023-24 Automotive, Hybrid / EV, & Diesel Training Catalog

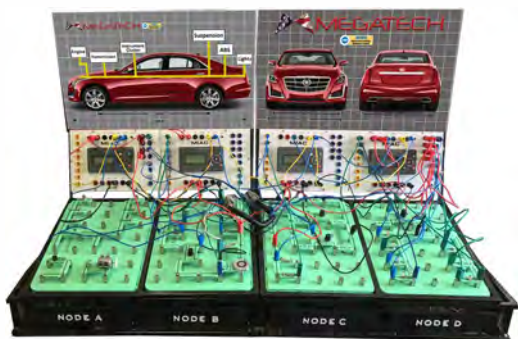


Accredited  
Training  
Provider

525 Woburn St. Suite 3, Tewksbury, MA 01876  
978-937-9600 • [www.megatechcorp.com](http://www.megatechcorp.com)

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*MEG-SMR  
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Demonstrator  
(p. 18)*



Accredited Training Provider



SUBARU

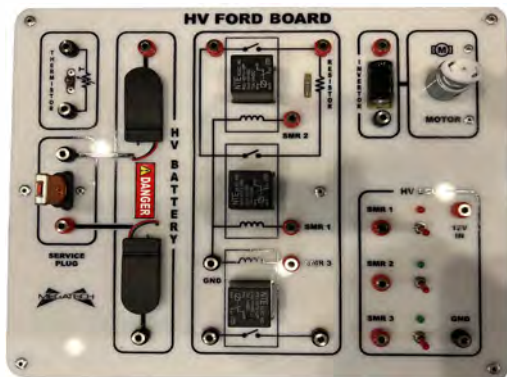


# New for 2023-24

## Megatech's EV/Hybrid Trainers



**MEGLOC-5281**  
**Electric Vehicle/Hybrid High Voltage**



**MEGFORD-HV**



**MEG007-HYB**  
**Hybrid Engine Performance Trainer**



**MEG-HV**  
**OEM**

## Engine Performance Trainer

Model: MEG007

- Late model domestic or foreign vehicle
- Converted to trainer with built-in fault insertion
- Hybrid and Diesel options available



## Gas Engine Performance Program

Model: MEG520



*Optional HVAC Phase Change*



**Fault Box**

# Engine Performance



## Oil-less 4 Cycle Multi-Fuel Engine

Model: MEG150

The MEG150 Engine Performance program has made the study of 4-cycle engines a simple task and has opened the door for students to conduct multiple experiments in alternative fuels. This patented, unique engine features all moving parts of a 4-cycle engine.

### Available with:

- Cylinder PV Mapping
- Data Acquisition

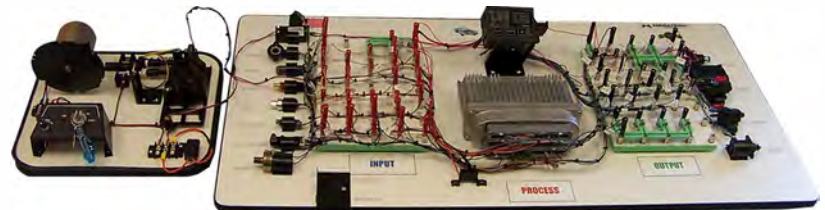
## Starting/Charging Trainer

Model: MEG690BT



## Engine Management System

Model: MEG570



## EVAP Trainer

Model: MEG-EVAP



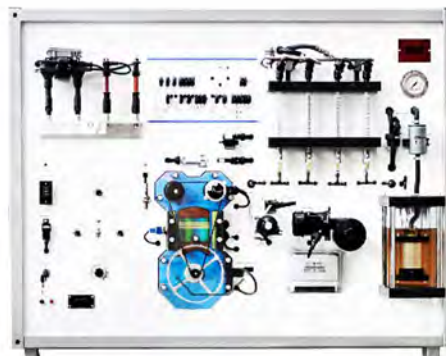
## OBDII Fuel Injection Trainer

Model: MEG550



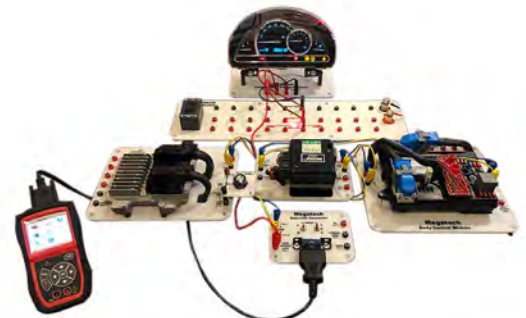
## Motronic Fuel Injection Trainer

Model: MEG550M

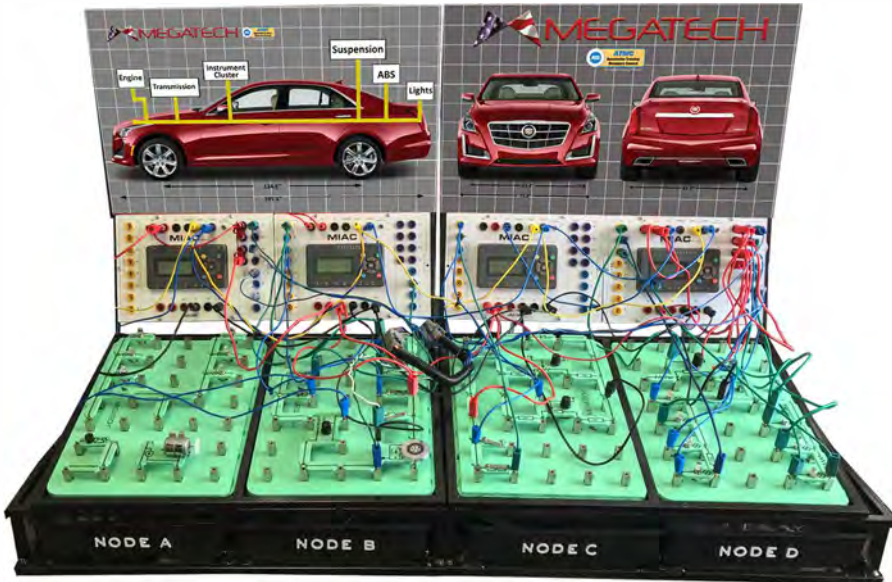


## CANbus Module Trainer

Model: MEG-CAN-MOD



## MEGLOC-CANbus CANbus System and Operation



This kit is a fully functioning CANbus system, mimicking vehicle operation by using four MIAC ECUs. A fifth ECU is used for system diagnosis, releasing faults and viewing CANbus messages.

### *Additional kits available:*

Motors, Generators & Charging Systems  
MEGLOC-2410A

Automotive High Voltage Battery Circuits  
MEGLOC-5281A

ECU architecture and logic  
MEGLOC-1800A

Automotive Wave Form Generator  
MEGLOC-9155



**Sensors and Controls in  
Automotive Solutions**  
MEGLOC-9834



**Automotive Fault Finding**  
MEGLOC-8170

As Used In



SUBARU



HYUNDAI



Training Centers



**Electricity / Electronics  
for Automotive**  
MEGLOC-9562



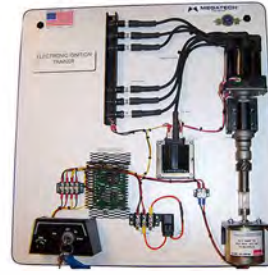
## Classic Series Electrical Trainers



**MEG80101**  
*Instrument Panel*



**MEG80102**  
*Distributorless Ignition*



**MEG80103**  
*Electronic Ignition*



**MEG80104**  
*Alternator System*



**MEG80105**  
*Starter System*



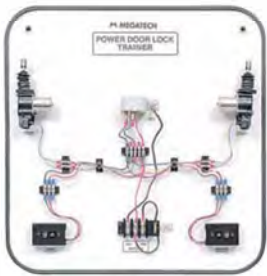
**MEG80106**  
*Directional/Hazard*



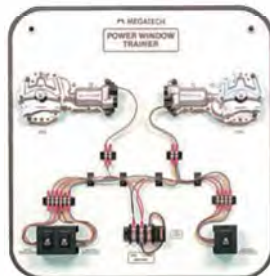
**MEG80107**  
*Lighting System*



**MEG80108**  
*Horn/Alarm*



**MEG80109**  
*Power Door Lock*



**MEG80110**  
*Power Window*



**MEG80111**  
*Radio System*



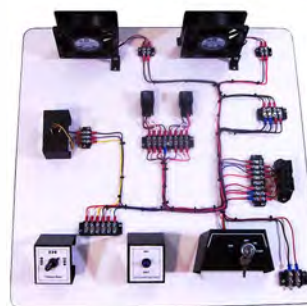
**MEG80112**  
*Wiper/Washer*



**MEG80-COLL**  
*Collision Avoidance*



**MEG80113**  
*Blower Motor*



**MEG80114**  
*Cooling System*



**MEG80115**  
*Power Seat*



## Series 2000 Electrical Trainers



MEG801012M  
Instrument Panel



MEG801022M  
Distributorless Ignition



MEG801032M  
Electronic Ignition



MEG801042M  
Alternator System



MEG801052M  
Starter System



MEG801132M  
Blower Motor



MEG801062M  
Directional/Hazard



MEG801072M  
Lighting System



MEG801082M  
Horn/Alarm



MEG801092M  
Power Door Lock



MEG801102M  
Power Window



MEG801142M  
Cooling Fan



MEG801112M  
Radio System



MEG801122M  
Wiper/Washer



MEG801152M  
Power Seat

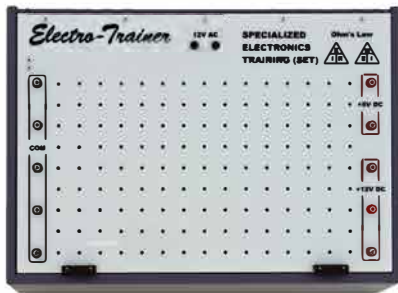
## Improved Chassis Design



Trainers require Fault Network Device MEG701514  
or manual switches



# Industry Trainers

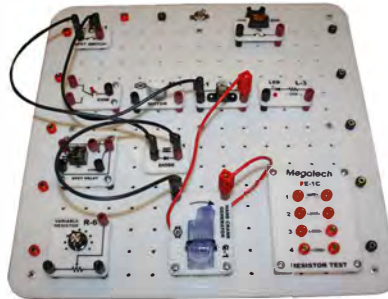


**GM SET**  
Model: MEG-GMSET

- GM Specialized Electronics training course
- Actual GM components
- Stage 1, 2, and 3 GM curriculum
- Separate tip jacks for DC, AC, and fixed 5 and 12 VDC power



**SUBARU**



**Automotive Electro Trainer**  
Model: MEGLECTRO-S

- Designed for Subaru of America training centers
- Provides “hands on” working knowledge of voltage, current and resistance w/ series & parallel circuits
- (10) Modules w/ Baseboard
- Curriculum Included



**Toyota Electrical Program**  
Model: MEG-623T

- Basic electricity trainer used in Toyota T-10 training programs
- Follows 622 & 623 courses
- Actual Toyota Parts
- Foundation in the basic principles of electricity and electronics
- OEM curriculum



**Automotive Electro Trainer**  
Model: MEGLECTRO/MEGLECTRO-2

- Students gain a foundation in the principles of electricity & electronics
- Provides “hands on” working knowledge of voltage, current and resistance w/ series & parallel circuits
- MEGLECTRO-2 includes faults delivered via toggle switch
- Built in switchable power supply



**Automotive Electro Trainer w/ STEM Concepts**

**STEM CONCEPTS APPLIED!!**

- Discovering Hybrid Modes of Operation
- Thermistors
- Cadmium Sulfide LDRs
- PN Junction/LED
- Series Connected LEDs
- Pulse Width Modulation
- Zener Diodes & MOSFET



- Ignition System
- Headlight & Flasher
- Power Distribution
- Engine Electric Fan
- Fuel Pump



## Basic Electrical Modules / Advanced Electronic Systems

This specialized program is divided into two categories: The Basic Electricity Program allows the student to transfer fundamental theory lessons into real work skills while The Basic Electronic Program includes solid state components that generate different signals for a comprehensive course. Collectively, these two programs provide a solid foundation from which anyone can build marketable skills in a constantly changing automotive world.



**MEGFORD-EE: Basic Electrical Modules (Includes 20+ modules, call for a complete list)**



**MEGFORD-ET: Basic Electronic Modules (Includes 15 modules, call for a complete list)**

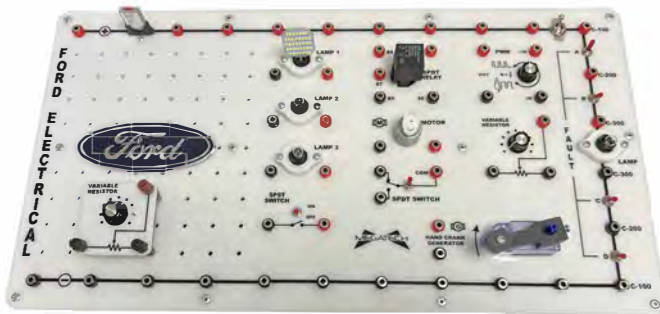


### Air Bag Trainer, Redeplorable (S.R.S) Model: MEG80116

With the Megatech (S.R.S.) Air Bag Trainer, the student can learn the operation, testing and troubleshooting of an actual operating deployable air bag. Because of the dangers involved with automotive live air bags, it is important that the student have the necessary knowledge and skills to practice with the Megatech trainer. A bank of switches can provide fault insertions and have the student do the diagnostics. The impact sensors, the wiring diagram and other components are based on Toyota parts.

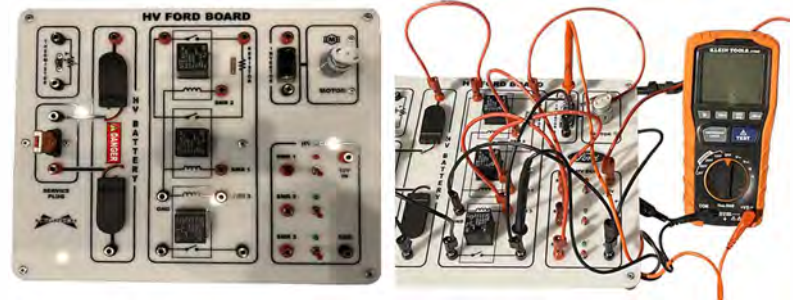


## New for 2023



### MEGFORD-EE1A

- Part of Ford's new globalization
- Basic electrical
- Lead into EV and HV
- Integrated fault circuit
- Expanded pegboard



### MEGFORD-HV

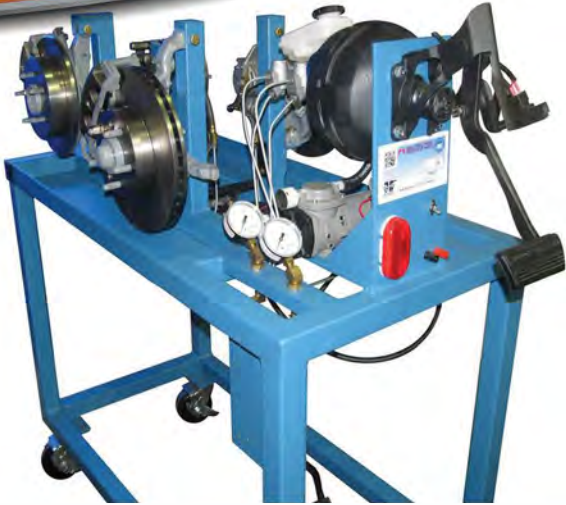
- Mustang Mach-E Configuration
- BECM control
- 3 contactors
- Service disconnect
- Other features



### CAI Autotronics Trainer

#### Model: MEGTRON

Traditional subjects such as Ohm's Law are presented using examples from real automotive systems. Calculations are based on real values that exist in automotive electrical systems. Components such as inductors, capacitors, transistors, diodes and logic gates are introduced in context with a specific automotive circuit. The intent of this program is to produce good automotive technicians that are capable of repairing the cars today! The course includes, Introduction to automobiles, Test equipment, Basic Electrical, Basic Electronics, Vehicle Technology, and Automotive Systems. It is fully delivered via the internet (HTML).



## 4 Wheel Brake System Trainer

Model: MEG-680PB4W

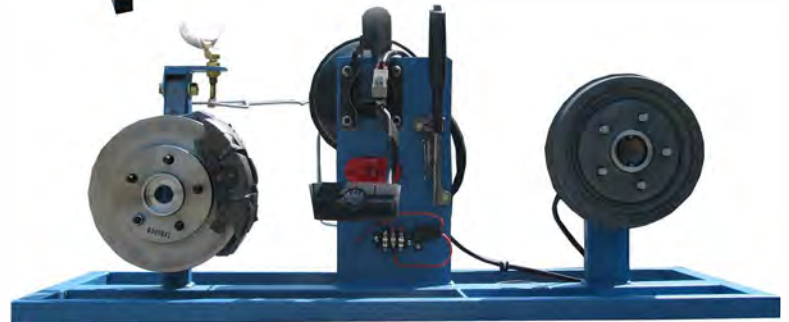
- 4 different Disc brake systems
- Complete with parking brake light, pressure warning light, and standard brake light
- 2 ABS Sensors harnessed out to terminal strips



## Drum/Disc Brake Trainer with Adjustable Strut

Model: MEG-680PB-ADJ

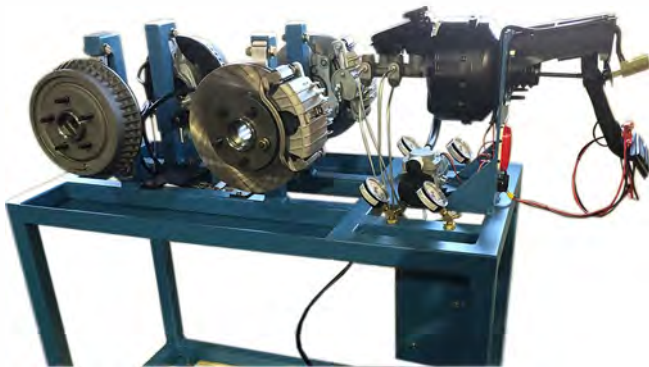
- Both drum and disc brakes w/ adjustable strut
- Covers adjusting brakes, replacing hoses and tubes, servicing master cylinder, caster and camber



## Power Boost Drum/Disc Brake Trainer

Model: MEG-680PB

Custom Cutaways Available



## 4 Wheel Brake System Trainer

Model: MEG-680PB2W2W

- 2 Disc in Front + 2 Drum in Rear
- Adjusting brakes, flushing hydraulic fluids, reconditioning of brakes



**MEGART1039**  
Disc Brake



**MEGART1333**  
Parking Brake



**MEGART1203**  
Drum Brake



**MEGART1096**  
Brake Booster



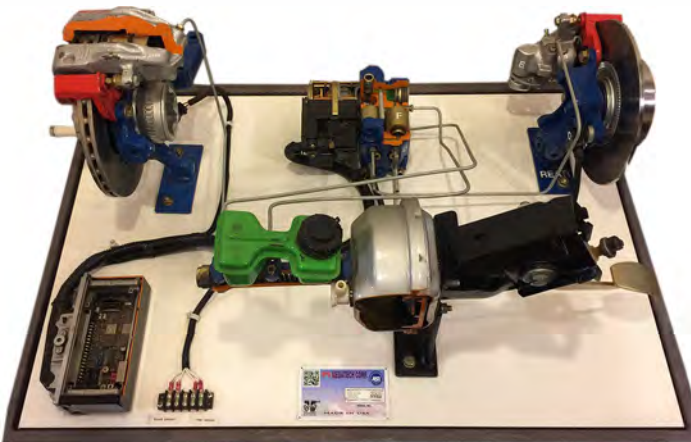
**Four Wheel Brake and ABS Trainer**

Model: MEG680PB-ABS



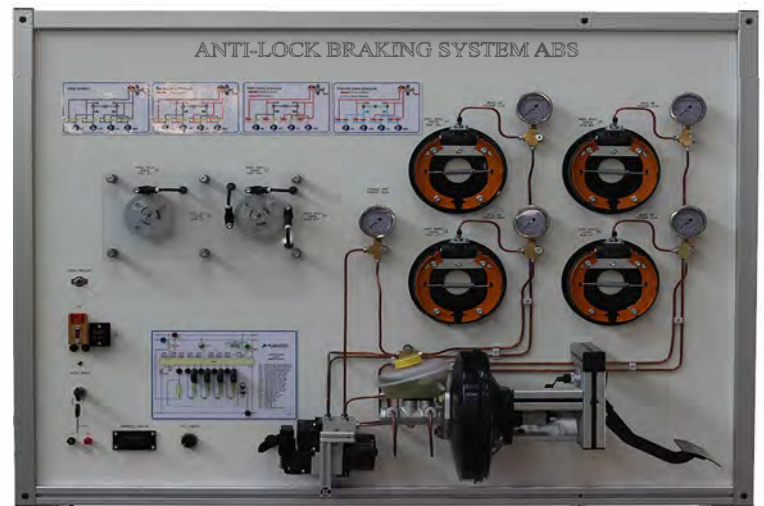
**Two Wheel ABS Trainer**

Model: MEGABS2



**Double Circuit Brake Trainer**

Model: MEGART-DCB



**Four Wheel ABS Trainer**

Model: MEGABS4

Megatech's ABS4 training system incorporates live components and hydraulic lines. It is a self-contained, fully functional braking system manufactured with authentic automotive components. The Bosch 5.3 provides a full array of pressure gauges that show front and rear line pressure and the individual pressure at each wheel.



**Electromechanical Parking Brake**

Model: MEGART-MSEPS1

## Front Suspension, Power Steering, Brake & Tire Program

Model: MEG-670GPS

- Complete McPherson Strut Assembly
- Heavy Steel Frame with Absorption Pads
- Pneumatic Lifts to Simulate Road Conditions
- Easy Accessibility and “Bench Level” Work Height
- Over 30 Competency Based Modules
- Tires Included for Additional Training



## Suspension, Steering & Brake Program

Model: MEG009



## Wheel Alignment Training Stand

Model: MEG-MSVAZ1



## 4 Wheel Suspension, Steering & Brake Trainer

Model: MEG008



# Suspension and Steering



**MEGART1224**  
Multi-Link Suspension Cutaway



**MEGART1306**  
Axle Geometry Model



**MEGART1305**  
Spreading Function Model



**MEGART1202**  
Suspension Strut  
w/ Wishbone



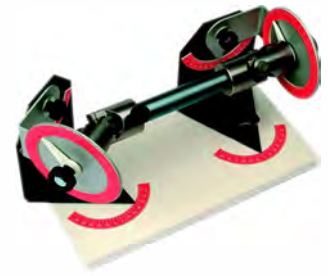
**MEGART1325**  
Suspension Strut



**MEGART1142**  
Variable Rack & Pinion Steering

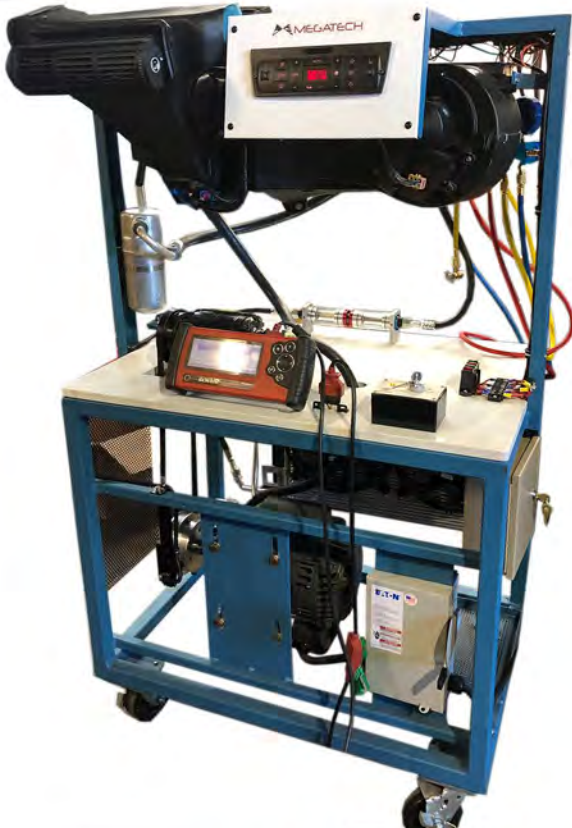


**MEGART1301**  
Electrical Rack & Pinion Steering



**MEGART1312**  
Universal Joints Model

**Custom Cutaways Available**



**Air Conditioning Trainer**

Model: MEG-660A or MEG-660M

- Hands on training for air conditioning systems
- Teaches basic test and maintenance procedures for the refrigerant loop
- Based on OBDII compliant model AC unit
- Available in either Ford or Audi
- Pre-assembled with a compressor operating with R134a refrigerant
- Charging hoses, manifold gauges, and battery cables included
- Sight Glass to view Phase Change



**MEGART10650**  
 Air Conditioning Model

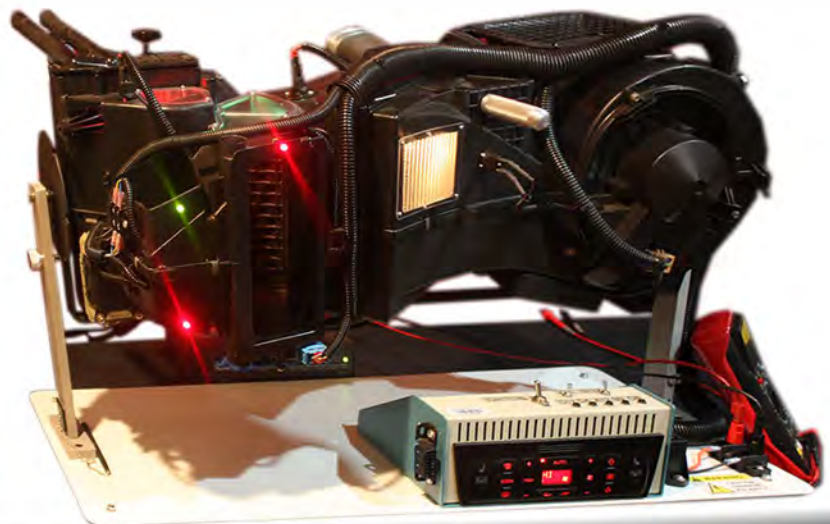


**MEGART1097**  
 Climatic Compressor



**HVAC Blend Door Trainer**

Model: MEG-660BD





# Manual Drivetrain & Axle



MEGART1360  
6 Speed Manual Transmission



MEGART1092  
Locking Differential



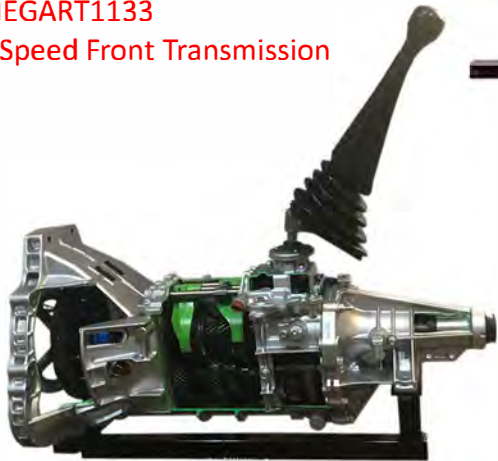
MEGART1353  
7 Gear Dual Clutch Transmission



MEGART1133  
5 Speed Front Transmission



MEGART11300  
4x4 Vehicle Transmission Assembly



MEGART1089  
Transmission w/ Differential



MEGART1356  
Rear Axle Differential



MEGART  
Clutch Demo



MEG-PNTY  
Planetary Gear

MEG-DRIVESHAFT

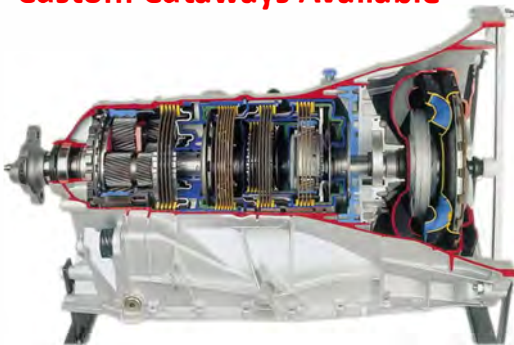


## Automatic Transaxle Trainer Model: MEG-620T

The Megatech Automatic Transaxle Trainer is designed to assist in educating the fundamentals of the front drive transaxle. The trainer features a fully functioning automatic transaxle that can be manually shifted through all forward and reverse gears. It features the popular A604 Automatic Transaxle found on most Chrysler front wheel drive vehicles. The package includes a complete competency based training program which instructs the student from basic operation and adjustment to complete overhaul of the transmission.



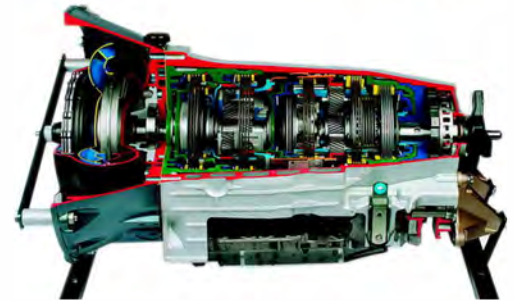
### Custom Cutaways Available



**MEGART1283**  
6 Gear Automatic Transmission



**MEG-PNTY-R**  
Ravineaux Gear Model



**MEGART1310**  
7 Gear Automatic Transmission



**Subaru CVT**



**MEGART1261**  
5 Gear Front Automatic  
Transmission w/ Torque Converter



**MEGART-CVT**  
CVT Demonstrator



**MEG003-E  
Engine**



**MEG003-SC  
Start Cart**

## Engine Repair Program

Model: MEG003-SC & MEG003-E

Combination of engine and fully functioning start cart, console, faults, test points, and the proper components to run the engine and verify correct engine function

- Custom engine models available
- GDI, MPI, SPFI, and Hybrid
- Diesel Engine and Start Cart also available



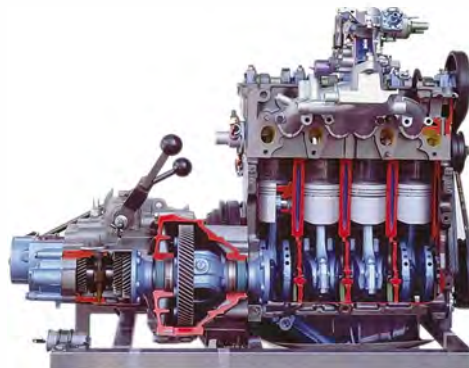
**Custom Cutaways Available**



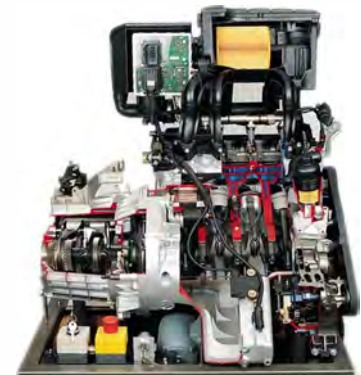
**MEGART-IVDB01  
Engine Cutaway**



**MEGART1343  
MB GDI Engine Cutaway**



**MEGART1249  
MB A Class Gas Engine Cutaway**



**MEGART1001  
VW Engine with Transmission**

## Hybrid Engine Performance

Model: MEG007-HYB

(Honda • Ford • Toyota • & More)

This unit is built from a hybrid model vehicle and converted into an Engine Performance Trainer with built-in fault simulation. It is complete with a running engine, transaxle, drivetrain, suspension, front brakes, dashboard electrical system and compute

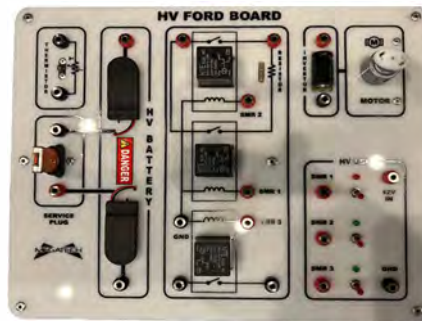


**MEG007-HYB-TP**  
Prius Hybrid with Technology Package / ADAS



## Hybrid Vehicle Trainer

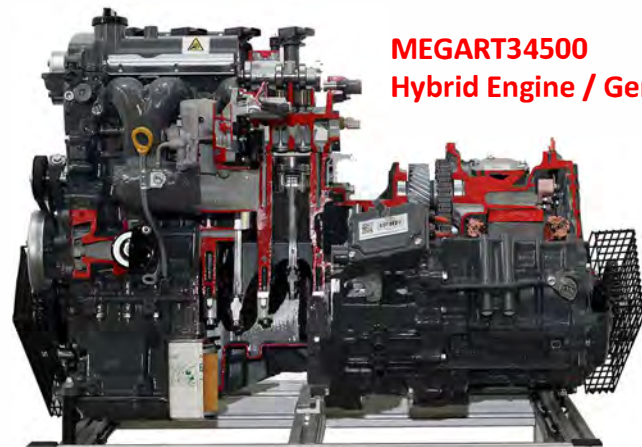
Model: MEGASTAR



**MEGFORD-HV**



**MEGEGART-FORD-HYB**  
Ford Hybrid Drive Cutaway



**MEGART34500**  
Hybrid Engine / Generator Cutaway



**MEG-MG1/MG2**  
Toyota Hybrid Drive Cutaway

**Custom Cutaways Available**



**System Main  
Relay Trainer**  
Model: MEG-SMR



**Electric Vehicle  
Battery Demonstrator**  
Model: MEG-EVB

**EV/Hybrid High Voltage Batteries**  
Model: MEGLOC-5281



**Automotive Solar  
Ventilation Trainer**  
Model: MEG-SV

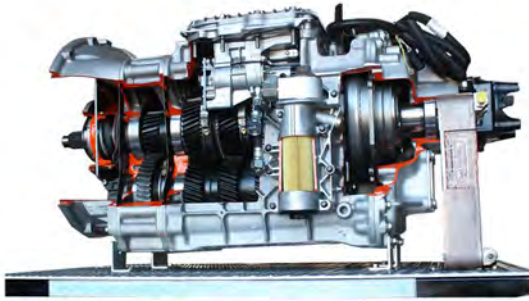


## Hybrid Cutaways



**MEG-HV  
OEM**





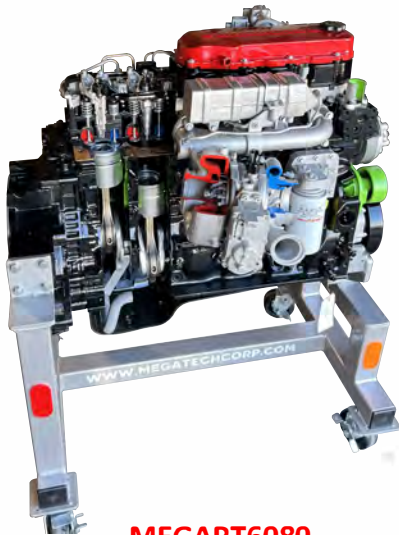
**MEGART-mDrive**  
**MACK mDrive Cutaway**



**MEGART-Fuller13**  
**Fuller Transmission Cutaway**



**MEGART-ALL3200SP**  
**Allison 3200SP Transmission Cutaway**



**MEGART6080**  
**Cummins HPCR Cutaway**

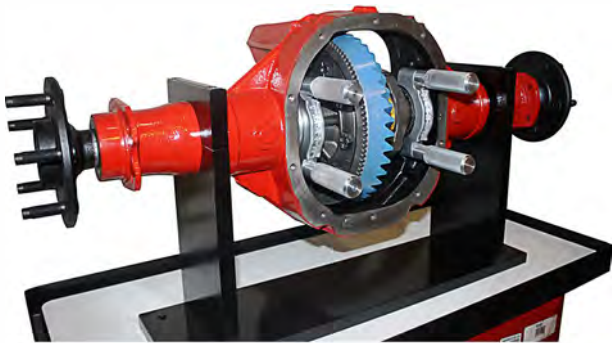


**MEGART6015**  
**Diesel Engine Cutaway**



**MEGART6083-MX13**  
**PACCAR MX-13 Engine**

## Custom Cutaways Available



**MEGARTF88**  
**Ford 8.8 Differential**



**MEGART1108**  
**Diesel Cylinder**



**MEGART1338M**  
**Injection Pump**



**MEGART10430**  
**Turbo Supercharger**

# Light / Mid Duty Diesel Trainers



## Light/Mid Duty Diesel Program

Models: MEG320 & MEG007-D

Megatech produces the largest number of training aids for comprehensive training for light & mid duty diesels. The MEG320 and MEG007-D programs consist of instructional modules on diesel engines, NATEF based worksheets, engines on a test bed or clip vehicle with a fuel and battery stand. Models include Cummins, Ford, GM Dodge, and others. The MEG320 model can be mounted with our custom closed-loop dyno.



### Standard Features:

- Full Aftertreatment
- DPF & SCR
- Tier IV Final
- Fault Box
- Breakout Box

**MEG007-D  
(Ford)**



**MEG320  
(Cummins 6.7L)**

## Single Cylinder Diesel Program

Model: MEG310



The MEG310 program provides advanced experiments in operating a single cylinder diesel engine by measuring torque and speed with the aid of an electric dynamometer. (Data Acquisition is also available: MEG310-DAD)



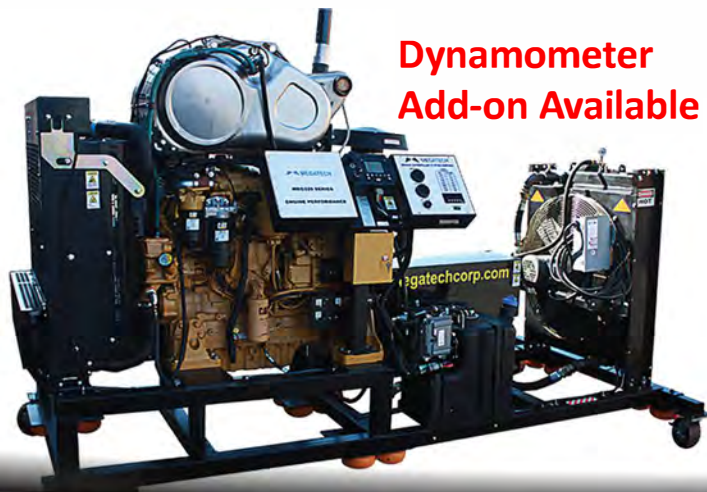
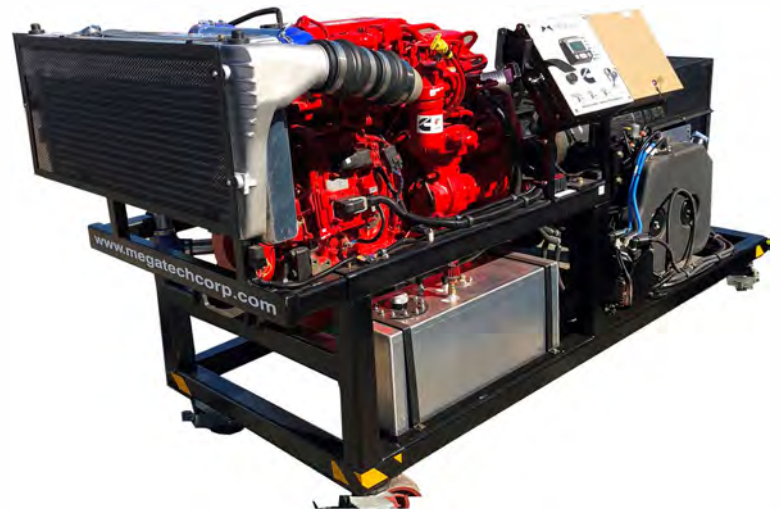
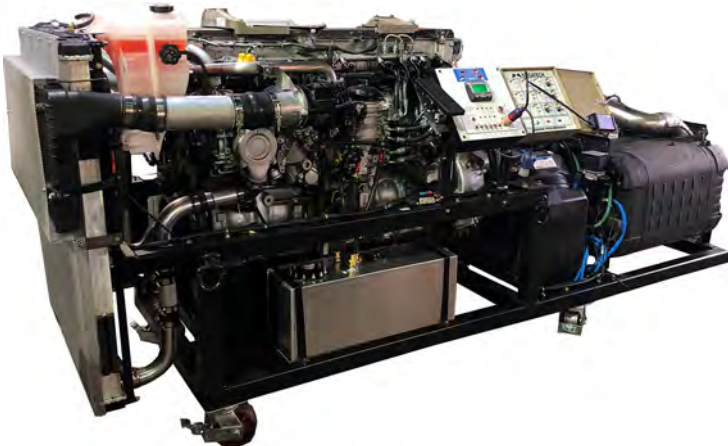
**MEG320  
(VW 2.0L TDi)**

## Truck/Heavy Duty Diesel Program Model: MEG320



These programs introduce the Cummins, Caterpillar, Navistar, Detroit Diesel, or other engines with all components assembled and ready for operation. The manuals provide full information and procedures for troubleshooting diesel engines. Potential problems are listed, diagnostic methods are indicated and repair procedures are detailed. These units are available with hydraulic/water absorption dynamometers for accurate HP/Torque measurements.

**Included:** Fault device, Breakout Box, Heavy Duty Casters, Aftertreatment (Dyno available)

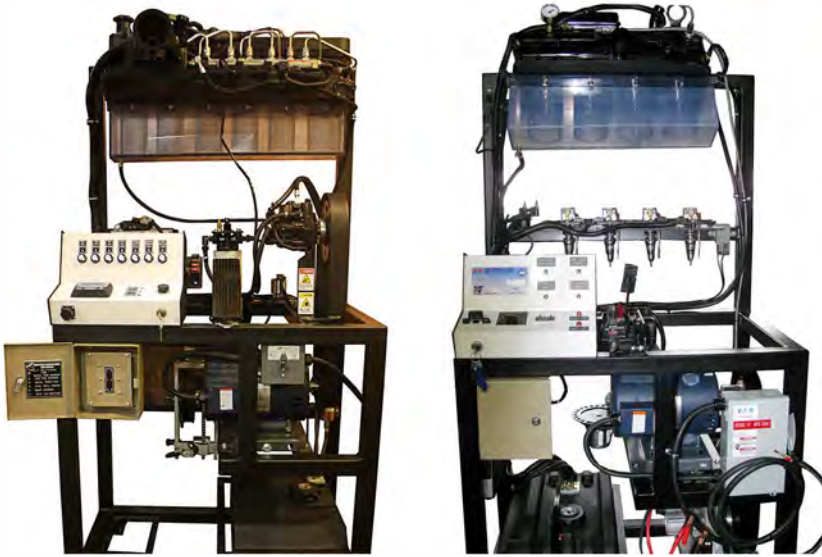


## Diesel Exhaust Aftertreatment Demonstrator Model: MEGART10630





# Truck / Heavy Diesel Trainers

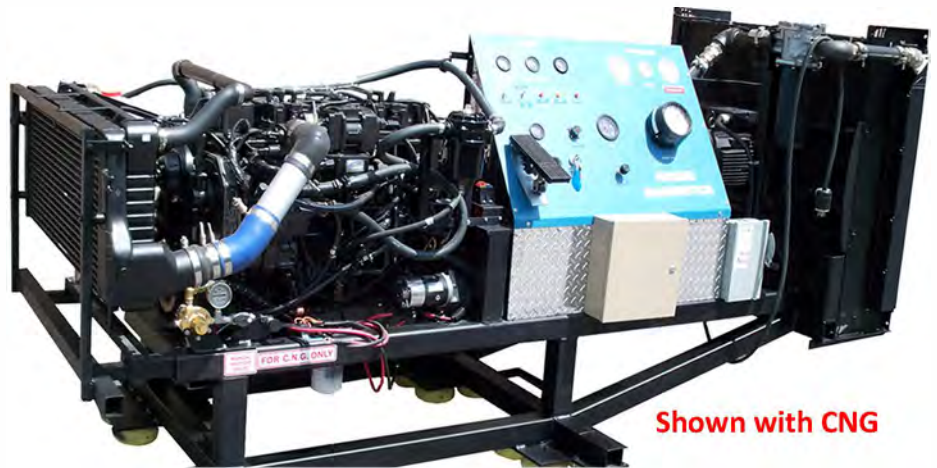


**Cummins Diesel Trainer:  
Electronically Controlled  
Common Rail & Power Stroke**  
Models: MEG550-DCR6 & MEG550-D

The Cummins Diesel Trainers are constructed from a Cummins ISB-type vehicle using an electronically controlled diesel fuel injection. The program consists of genuine equipment and educational materials to teach the fundamentals of Common Rail fuel injection and engine control. The electronics are faulted for student diagnosis and practice. (Ford model also available)

**Engine Test Stand with CNG**  
Model: MEG330

The MEG330 trainer is a full turn-key CNG engine training unit based on a larger diesel engine or gasoline based version as well (LPG). Trainers can be built with or without a closed-loop dyno.



Shown with CNG

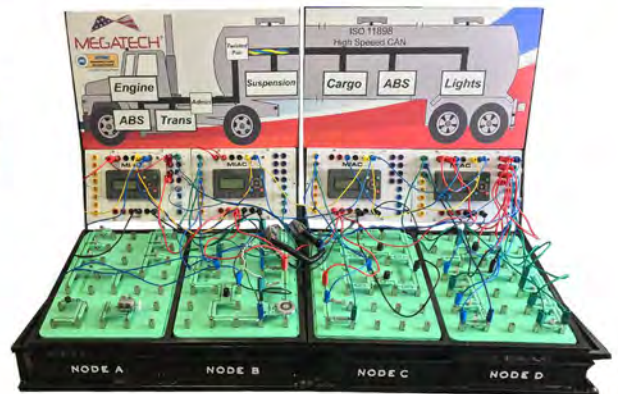
**Truck Lighting System Trainer**  
Model: MEG80107-T



**Heavy Duty Starting & Charging**  
Model: MEG690



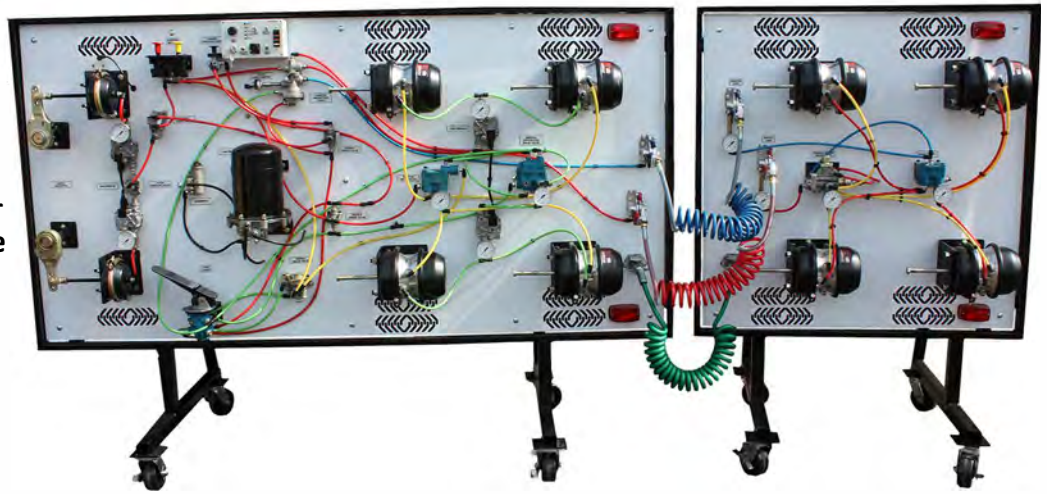
**Heavy Duty CANbus Systems**  
Model: MEGCANbus-Truck



## Airbrake & ABS Trainer

Model: MEG685-ABS

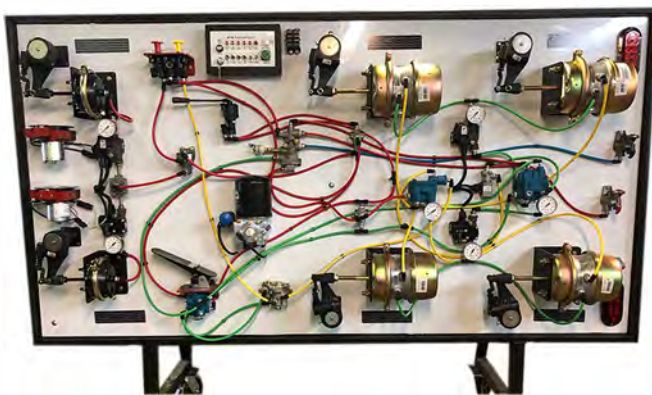
Fully functioning Bendix Truck Airbrake system with real truck brake parts (air valves, brake boosters, control devices, etc.)



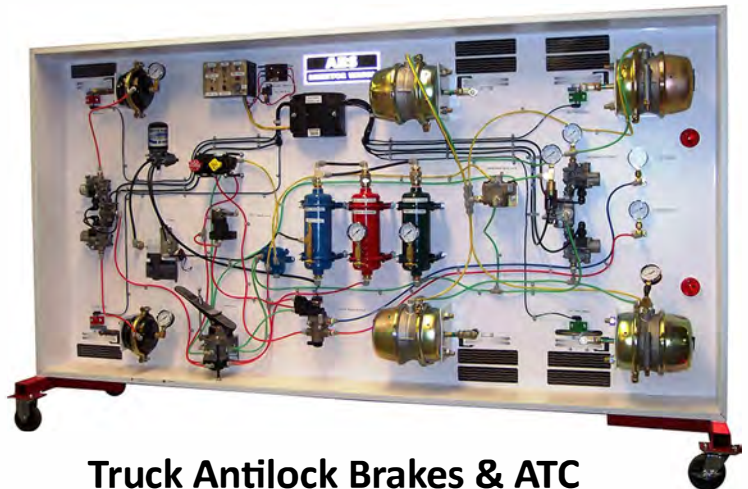
**Truck Airbrake Trainer**  
Model: MEG685



*Truck Brake Lab  
at Pikes Peak Community College*



**Truck Airbrake and ABS Trainer**  
Model: MEG-ABS-EC60



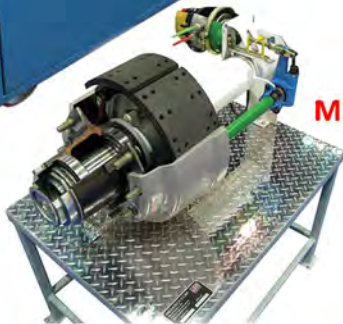
**Truck Antilock Brakes & ATC**  
Model: MEG-ABS/ATC



**Mobile Hydraulics**

Model: MEG820 (Vertical Workstation Available)

This program provides hands-on activities with components commonly used in construction equipment, agricultural and utility vehicles. It includes: Instructional modules, audio/visual presentations, instructor's guide, hydraulic tester, and mobile hydraulic workstation. It has a variable working pressure capacity of 500-1000 PSI and includes a heavy-duty workbench with instruments and gauges.

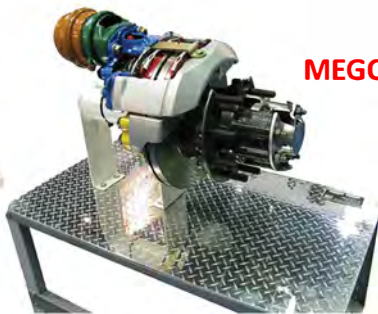


**MEGCUT-DRUM**



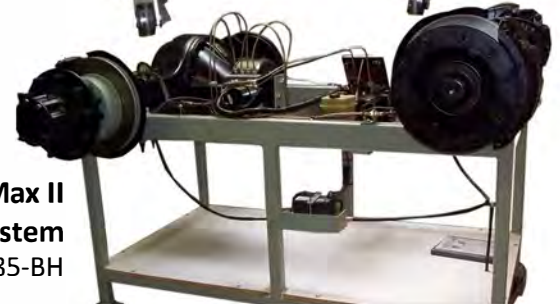
**Meritor Steer Axle Drum Brake Trainer**  
Model: MEG685-MSA

**MEGCUT-CHAMBER**

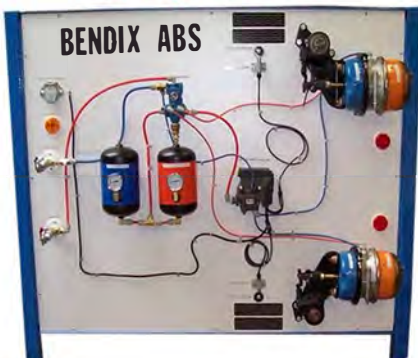


**MEGCUT-DISC**

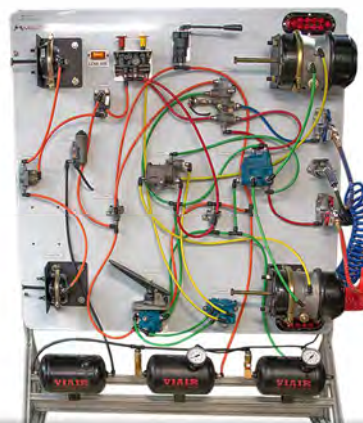
**Bosch Hydro-Max II Brake System**  
Model: MEG685-BH



**BENDIX Trailer Air Brake ABS Trainer**  
Model: MEGABS-BX  
WABCO system available



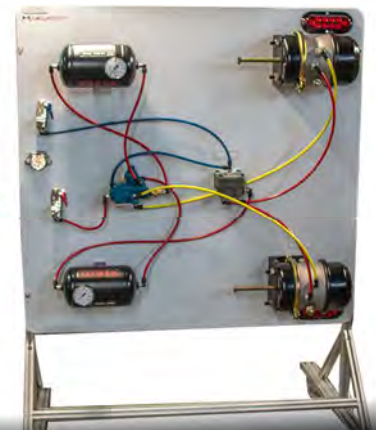
Model : MEG685-TR



**Tractor + Trailer Air Brake System**

WABCO or BENDIX systems available

Model : MEG685-TL



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