

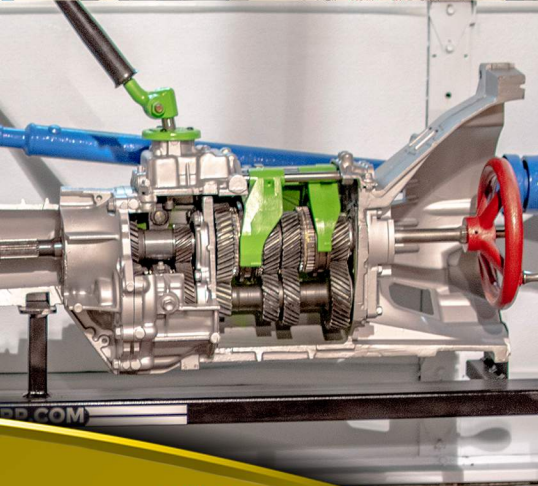


MEGATECH

A World Leader in Transportation
& STEM Training



2021 Automotive Diesel Hybrid & EV Training Catalog



Accredited
Training
Provider

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Training
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MEGATECH



SUBARU



California
Automotive
Teachers

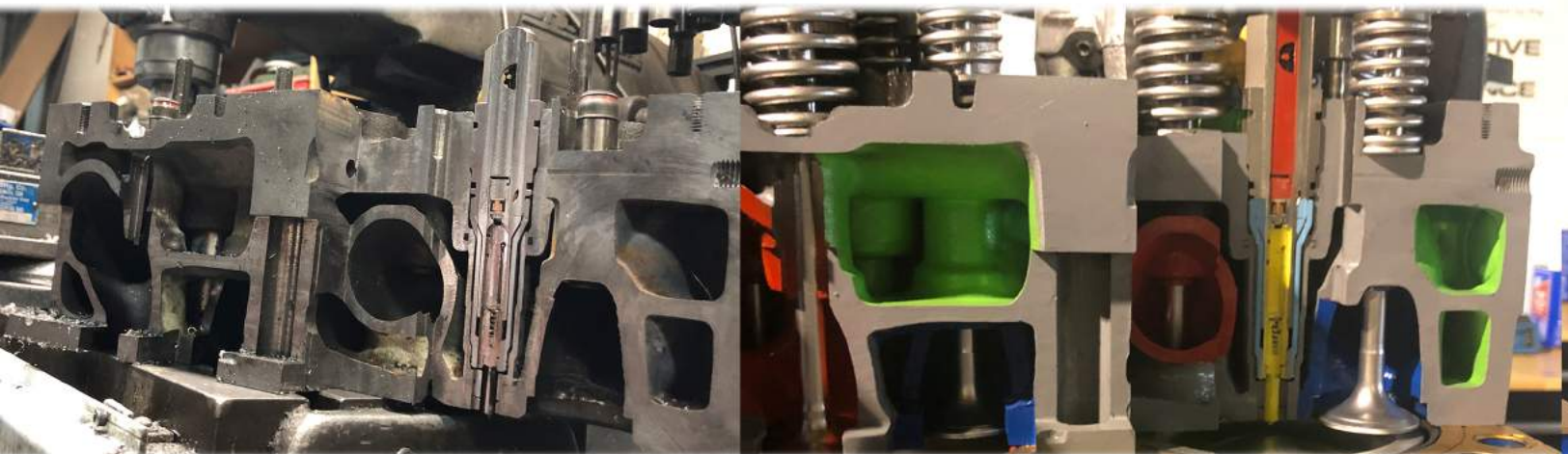


HYUNDAI



New for 2021

Introducing Megatech's new line of Cutaways

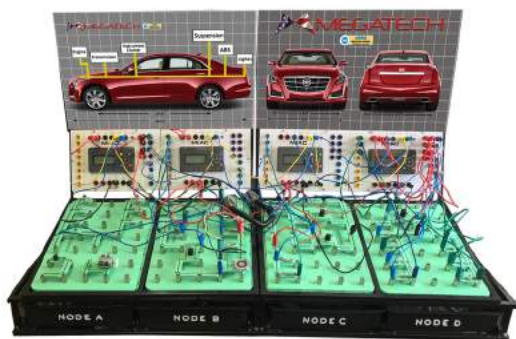


Automotive, Diesel, and Hybrid

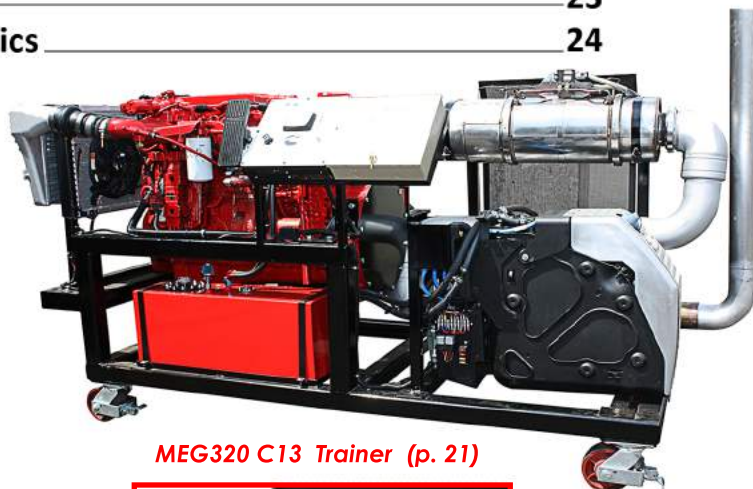


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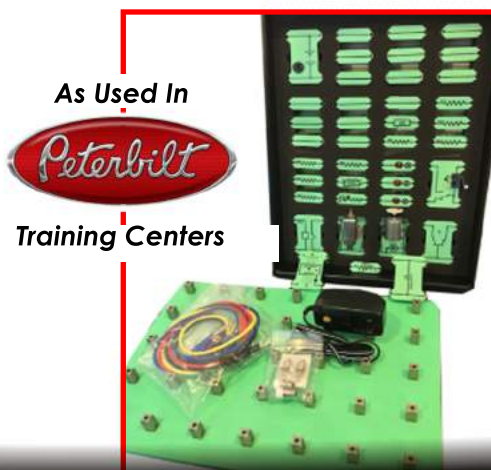
Automotive CANbus Trainer (p. 3)



MEG320 C13 Trainer (p. 21)



MEG007-HYB (p. 17)



As Used In
Peterbilt
Training Centers

*MEGLOC-9562
Basic Electronics/
Electrical for Automotive
(p. 3)*

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



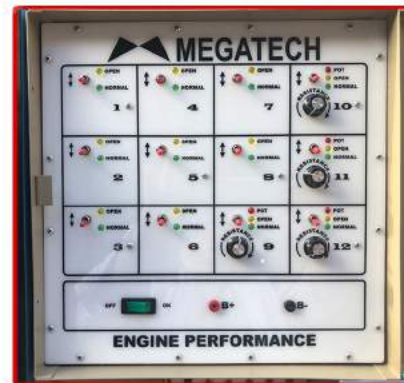
GM 2.2



Ford GDI



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



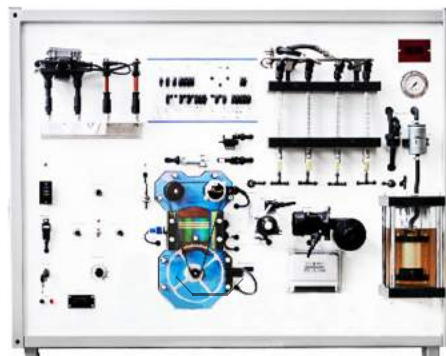
OBDII Fuel Injection Trainer

Model: MEG550



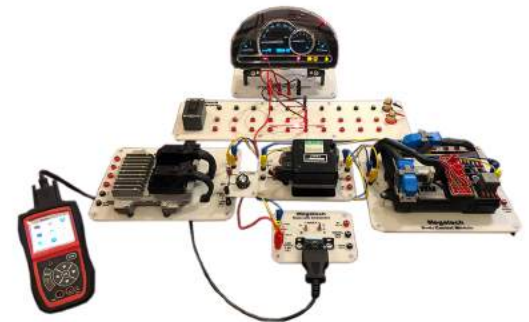
Motronic Fuel Injection Trainer

Model: MEG550M



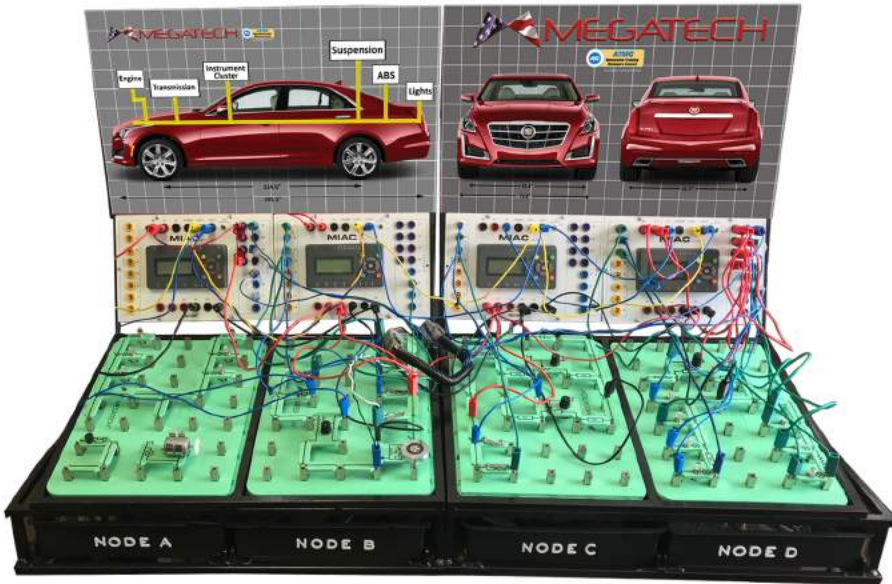
CANbus Module Trainer

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:

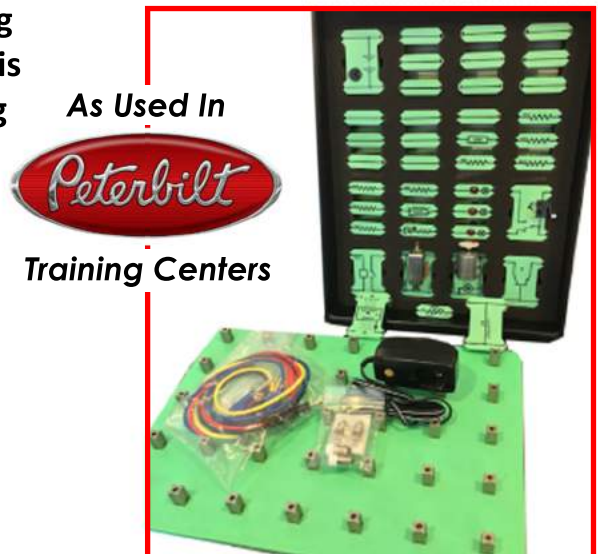
- Motors, Generators & Charging Systems
- Automotive High Voltage Battery Circuits
- ECU architecture and logic
- Intro to Digital Electronics
- AC Principles for Automotive
- PICmicro Systems
- Advanced Electrical Principle



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



Automotive Fault Finding
MEGLOC-8170



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



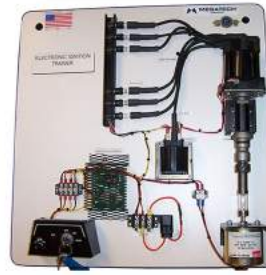
Classic Series Electrical Trainers



MEG80101
Instrument Panel



MEG80102
Distributorless Ignition



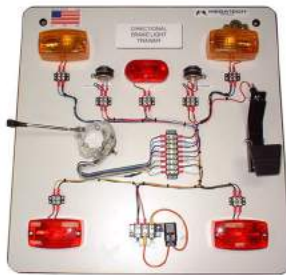
MEG80103
Electronic Ignition



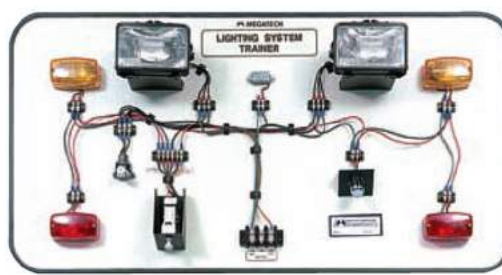
MEG80104
Alternator System



MEG80105
Starter System



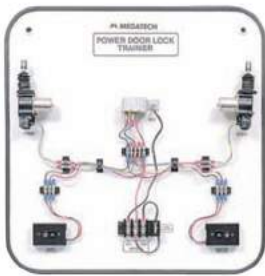
MEG80106
Directional/Hazard



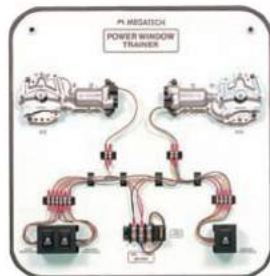
MEG80107
Lighting System



MEG80108
Horn/Alarm



MEG80109
Power Door Lock



MEG80110
Power Window



MEG80111
Radio System



MEG80112
Wiper/Washer



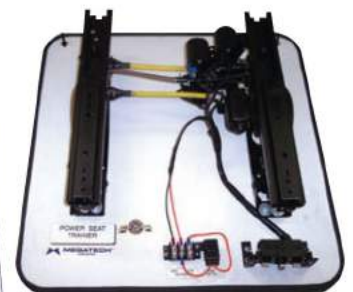
MEG80-COLL
Collision Avoidance



MEG80113
Blower Motor



MEG80114
Cooling System



MEG80115
Power Seat



Electrical/Electronic Systems

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

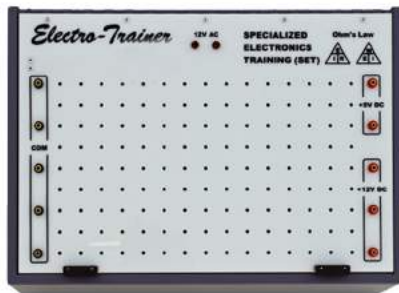


Trainers require Fault Network Device MEG701514
or manual switches

Electrical/Electronic Systems



Industry Trainers

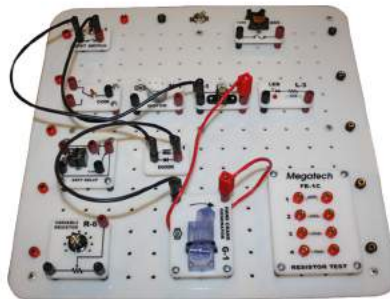


GM SET
Model: MEG-GMSET

- 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)



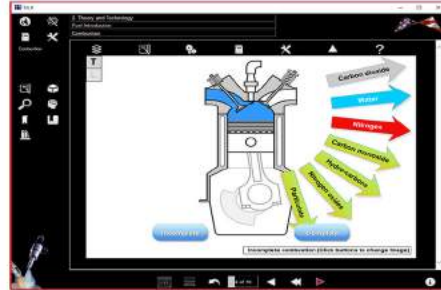
MEGFORD-ET: Basic Electronic Modules (Includes 15 modules, call for a complete list)



Air Bag Trainer, Redeployable (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.

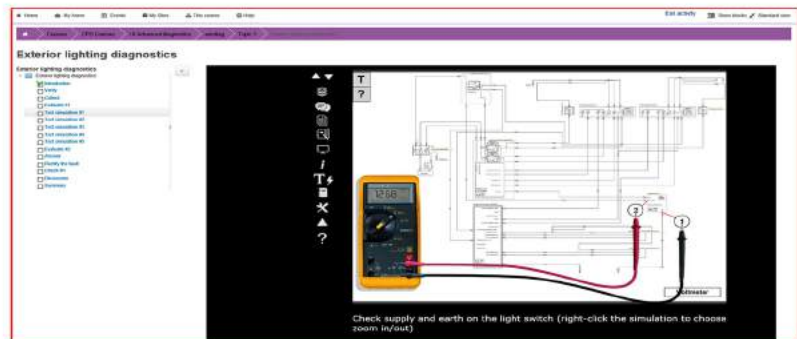
Megatech Interactive Training Software Model: MEGMIT



This software supplements the hands on training provided by Megatech. As instructors know, you can no longer just “tell” students how things work, but provide varying means of bringing that hardware to life. Now the student obtains a complete and varied delivery from textbooks/handouts, to bullet points, questions, worksheets, animations, and assignments. The program covers the 3 areas of ASE technical requirements (MLR, AST & MAST), diesel fuel systems, hybrid cars with over 400 hours of interactive learning. It has over 1500 questions, 300 worksheets, assignments, glossary, toolbox, and main menu, web link and many activities. Instructors can access the Resource Database, which has 3D animations, videos, and clear images that can be viewed full size via a LED projector.

Features and benefits:

- MLR, AST & MAST Levels w/ 400+ Hours of learning
- Prep reduced or even eliminated
- Self-learning-individualized curriculum
- Translation and interactive on every screen
- Assignments and self-assessments
- Multiple-choice questions linked to the learning
- Animations, videos, voice over, activities and more
- Master copy DVD to colleges and schools
- VLE/LMS web access
- Structured to match latest qualifications/standards
- MEGTRON integration



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



4 Wheel Brake System Trainer

Model: MEG-680PB2W2W

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



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



MEGART1039
Disc Brake



MEGART1333
Parking Brake



MEGART1203
Drum Brake



MEGART1096
Brake Booster

Brakes



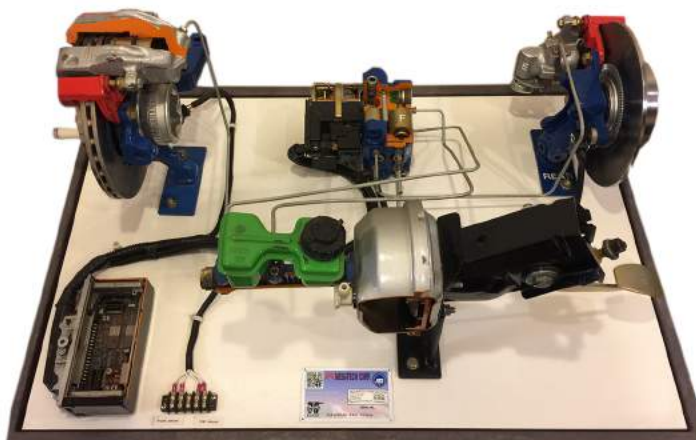
Four Wheel Brake and ABS Trainer

Model: MEG680PB-ABS



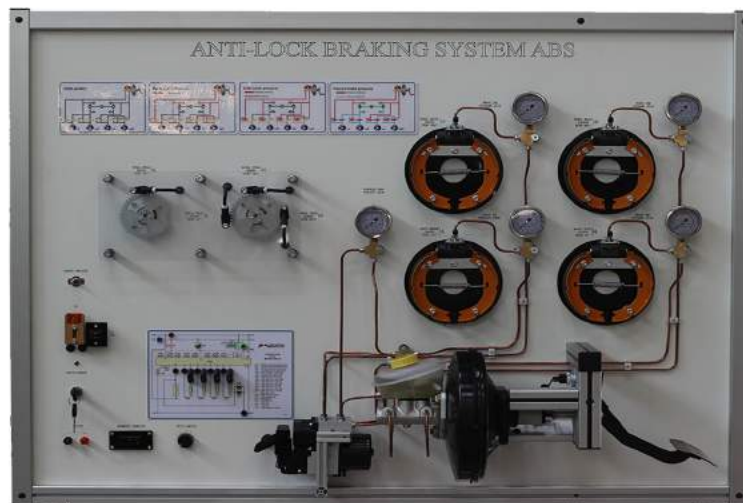
Two Wheel ABS Trainer

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/ Fishbone



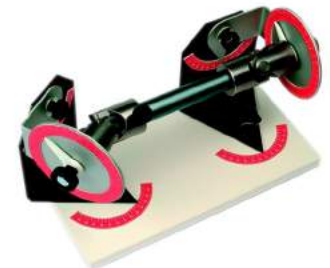
MEGART1325
Suspension Strut



MEGART1142
Variable Rack & Pinion Steering



MEGART1301
Electrical Rack & Pinion Steering



MEGART1312
Universal Joints Model

Custom Cutaways Available



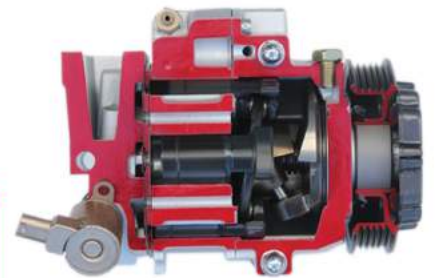
Air Conditioning Trainer

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



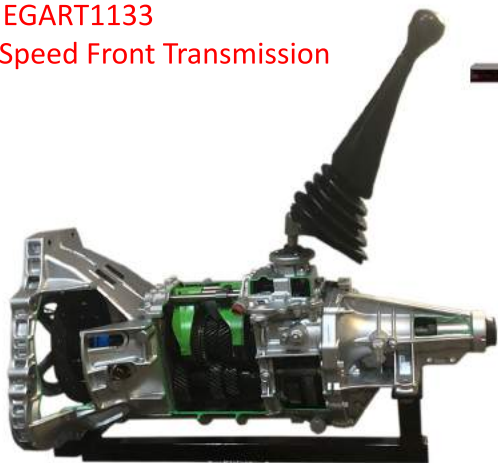
MEGART1353
7 Gear Dual Clutch Transmission



MEGART1133
5 Speed Front Transmission



MEGART11300
4x4 Vehicle Transmission Assembly



MEGART1089
Transmission w/ Differential



MEGART1356
Rear Axle Differential



MEGART1043
Torsen Differential



MEG-PNTY
Planetary Gear

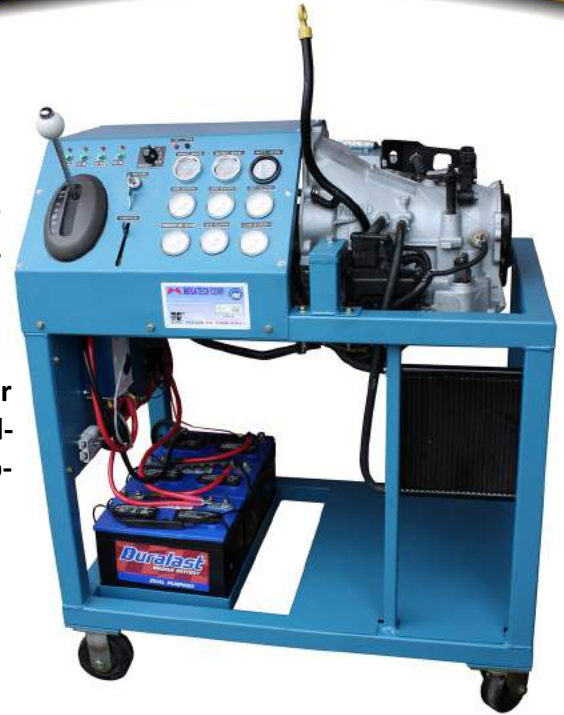
MEG-DRIVESHAFT



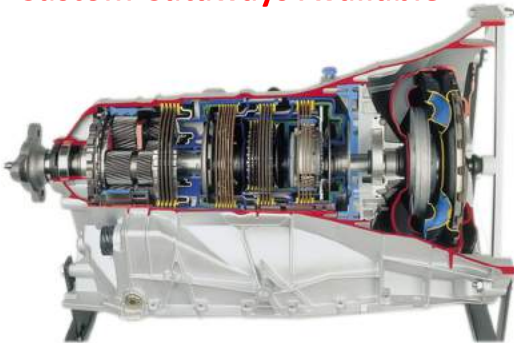
Custom Cutaways Available

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.



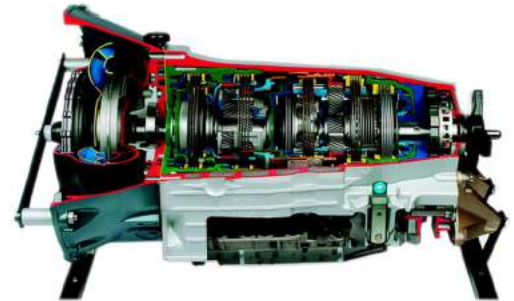
Custom Cutaways Available



MEGART1283
6 Gear Automatic Transmission



MEG-PNTY-R
Ravineaux Gear Model



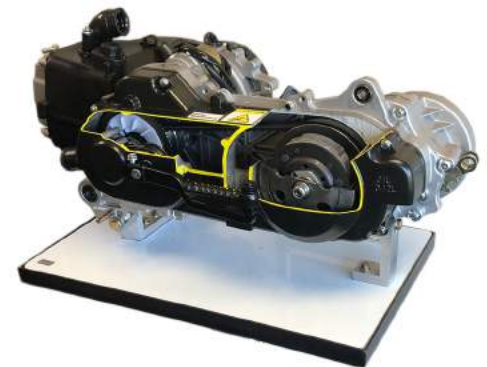
MEGART1310
7 Gear Automatic Transmission



MEGART1090
5 Speed Automatic Transmission



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

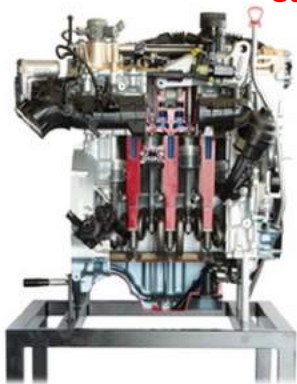
- Custom engine models available
- GDI, MPI, SPFI, and Hybrid
- Diesel Engine and Start Cart also available



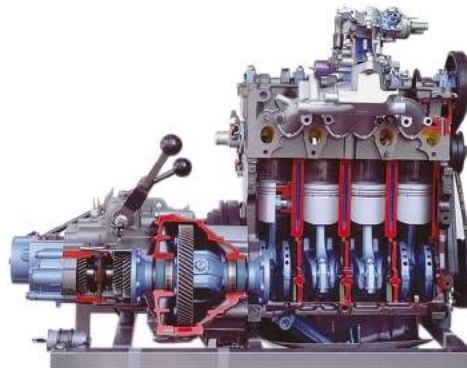
Custom Cutaways Available



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



MEGEGART-FORD-HYB
Ford Hybrid Drive Cutaway



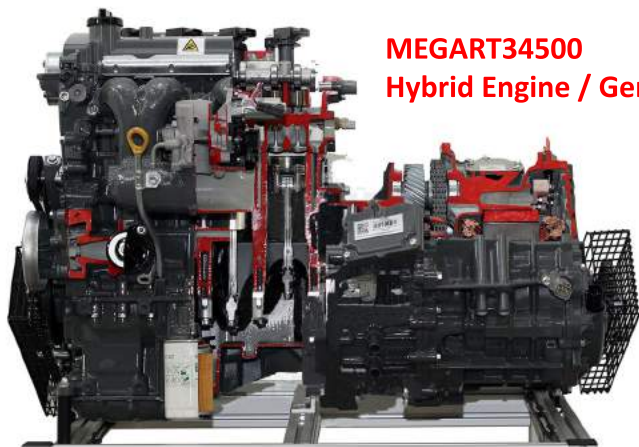
Hybrid Vehicle Trainer

Model: MEGASTAR

Megatech's patented technology in electric dynamometers has enabled the design of the hybrid vehicle to be utilized for dual purposes. It is a vehicle of combined technologies, incorporating alternative energy use for transportation purposes and can run on solar energy combined with gaseous fuels such as propane/natural gas or gasohol.



MEG-MG1/MG2
Toyota Hybrid Drive Cutaway



MEGART34500
Hybrid Engine / Generator 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



Hybrid Cutaways

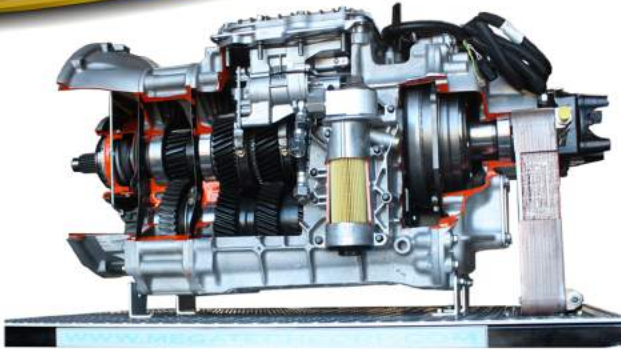


**Automotive Solar
Ventilation Trainer**
Model: MEG-SV

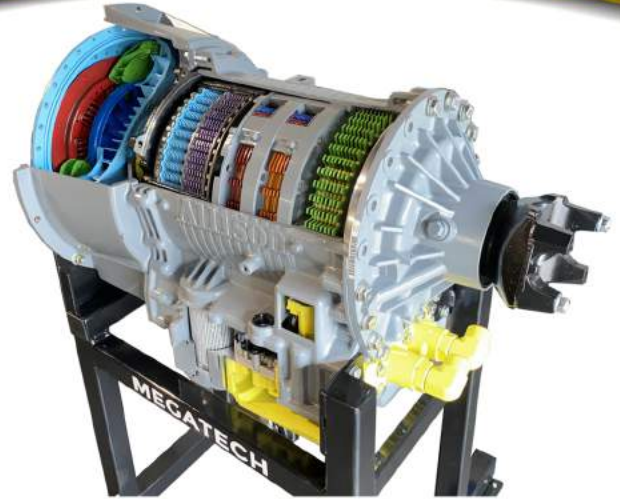


Fuel Cell / Energy Box
Model: MEG-FC-EB





MEGART-mDrive
MACK mDrive Cutaway



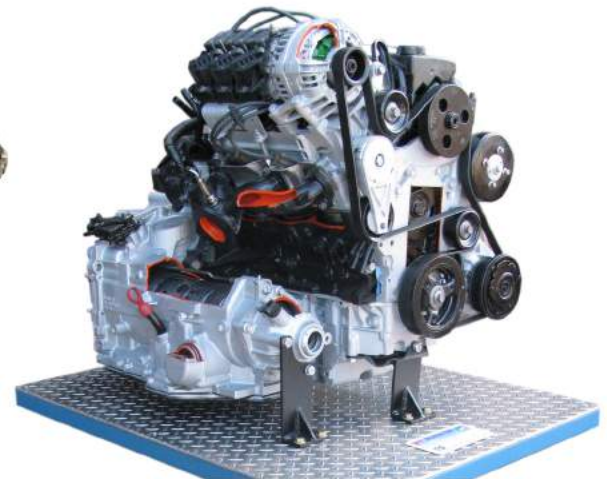
MEGART-ALL3200SP
Allison 3200SP Transmission Cutaway



MEGARTD6K
Dozer Final Drive Differential



MEGART6015
Diesel Engine Cutaway



MEGART6015-GM6.5
GM 6.5L Diesel Engine Cutaway



MEGARTF88
Ford 8.8 Differential

Custom Cutaways Available



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.



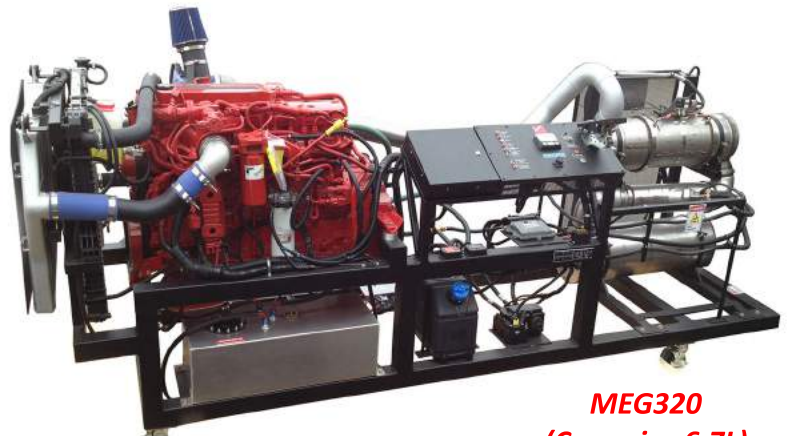
MEG007-D (GM)



MEG007-D
(Ford)

Standard Features:

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



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)



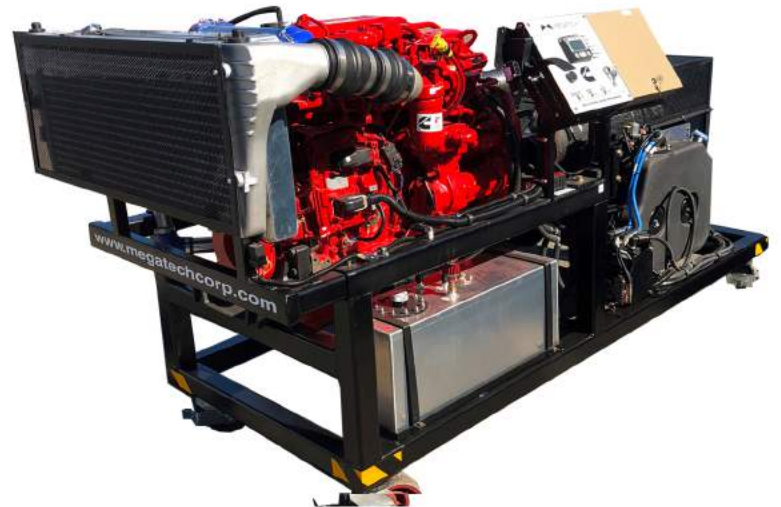
MEG320
(VW 2.0L TDi)

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)

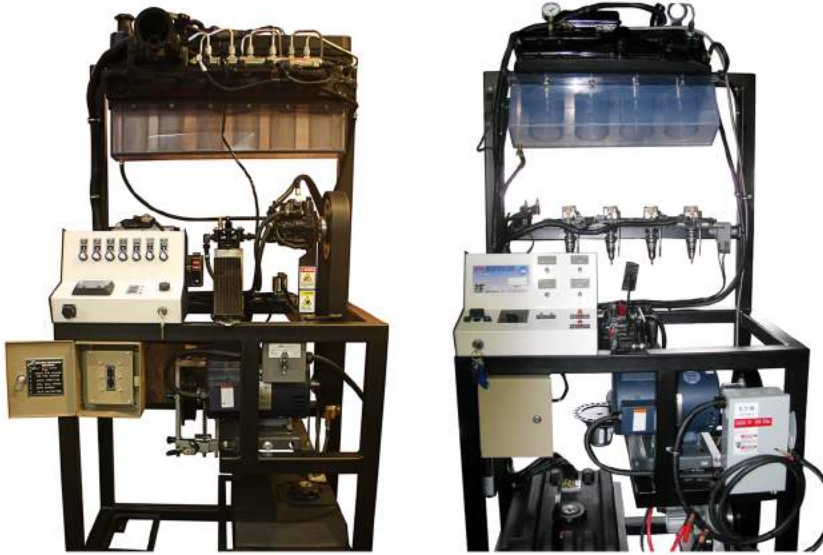


**Dynamometer
Add-on Available**

Diesel Exhaust Aftertreatment Demonstrator Model: MEGART10630



Truck / Heavy Diesel Trainers

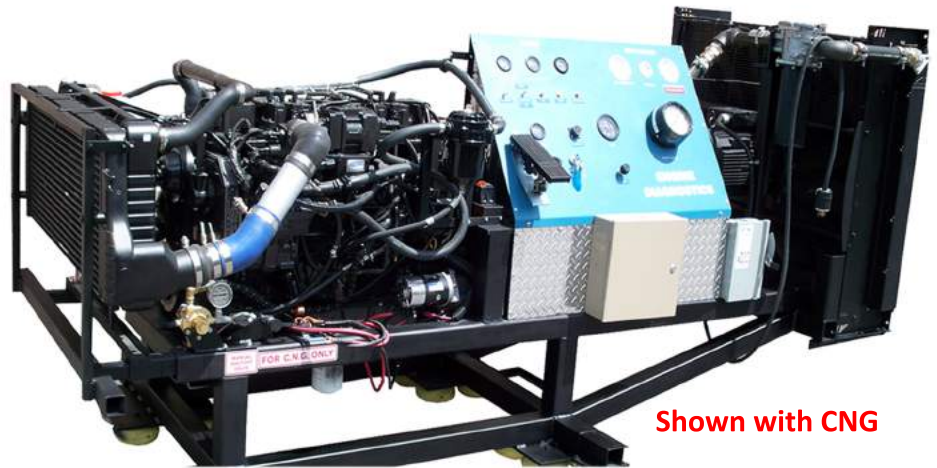


**Cummins Diesel Trainer:
Electronically Controlled
Common Rail & Power Stroke**
Models: MEG550-DCR6 & MEG550-D

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

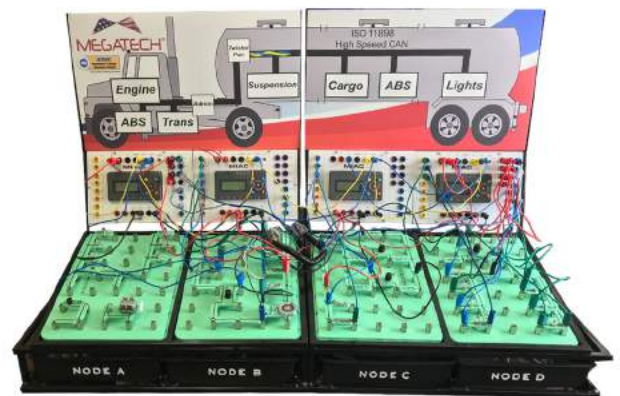
Truck Lighting System Trainer
Model: MEG80107-T



Heavy Duty Starting & Charging
Model: MEG690



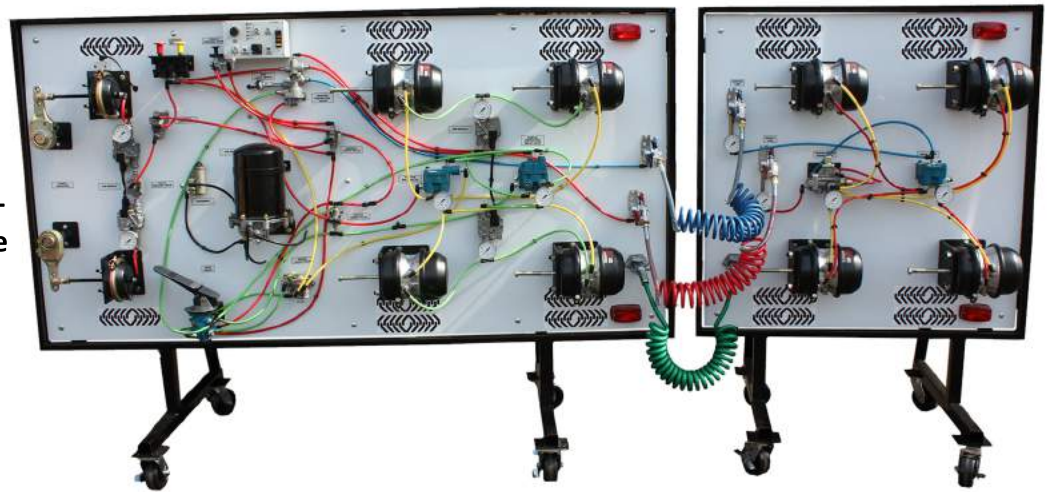
Heavy Duty CANbus Systems
Model: MEGCANbus-Truck



Airbrake & ABS Trainer

Model: MEG685-ABS

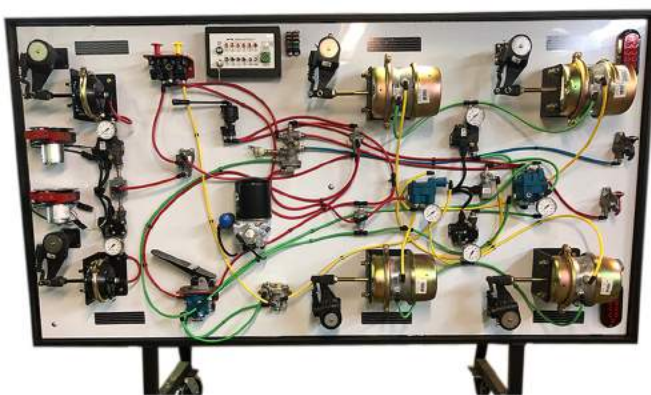
Fully functioning Bendix Truck Airbrake system with real truck brake parts (air valves, brake boosters, control devices, etc.)



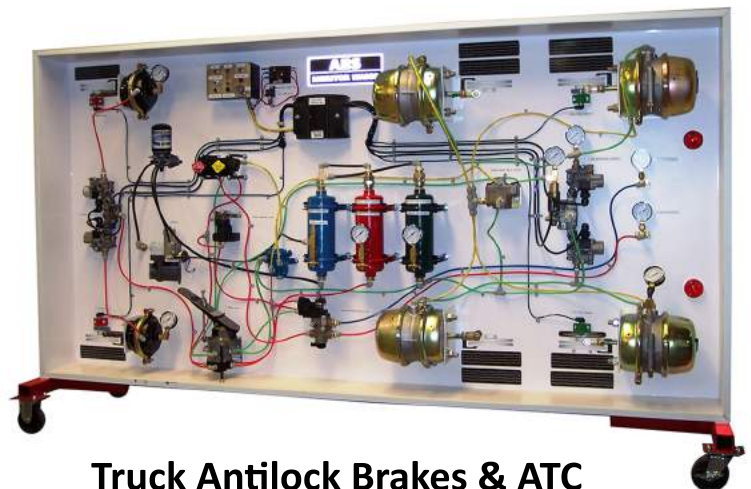
Truck Airbrake Trainer
Model: MEG685



*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

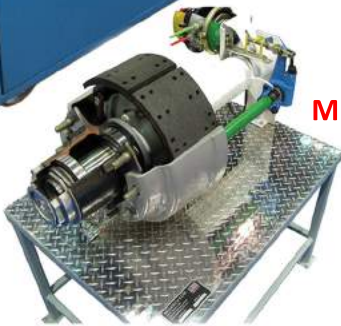


Mobile Hydraulics

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.

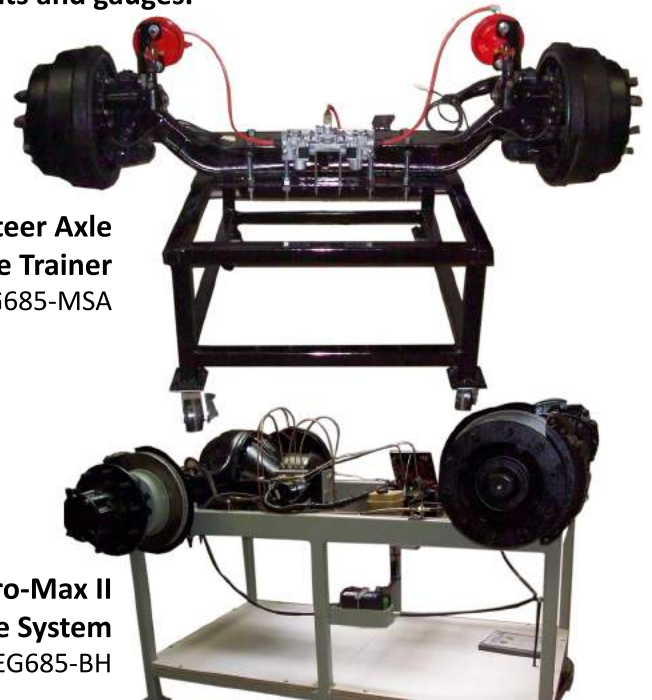
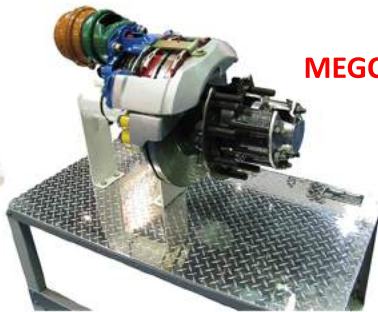
MEGCUT-DRUM



MEGCUT-CHAMBER



MEGCUT-DISC



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

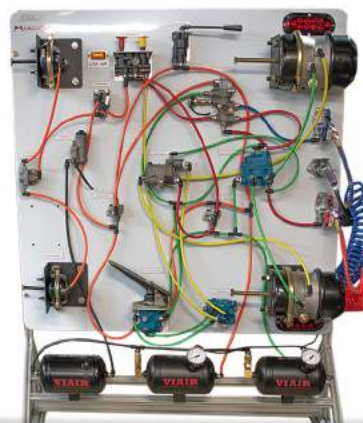
**Bosch Hydro-Max II
Brake System**
Model: MEG685-BH

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

WABCO system available



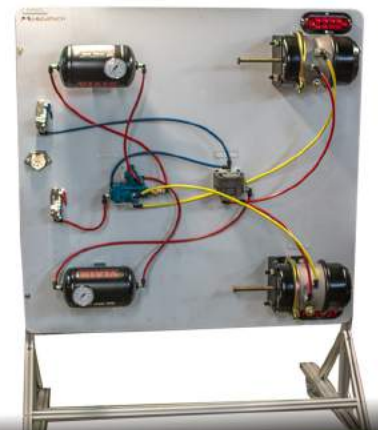
Model : MEG685-TR



**Tractor + Trailer
Air Brake System**

**WABCO or BENDIX
systems available**

Model : MEG685-TL



ASE CASE CERTIFIED TRAINING



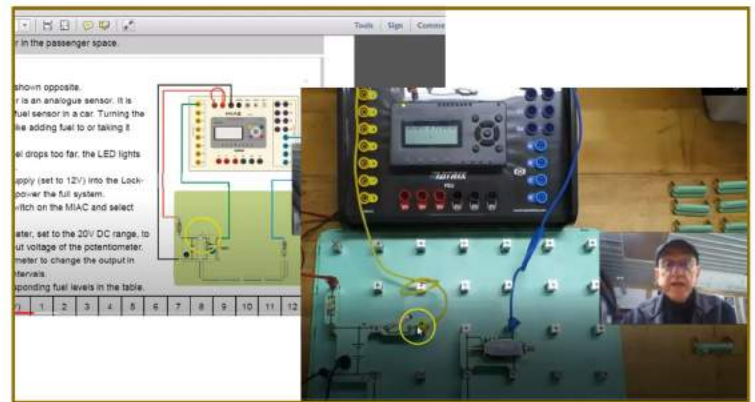
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