



Automotive Service Technology

Worldskills proud supporter

OFFERING YOU INTUITIVE SOLUTIONS

For more than 50 years, ConsuLab has devoted our business plan to offering intuitive solutions to educators. This is more than just a catch phrase or a marketing line; this is at the core of ConsuLab's beliefs. Since our beginnings in 1969, ConsuLab has specialized in manufacturing and distributing high-quality training equipment to help you teach ever-evolving technology.

Over this time, we have developed a reputation for quality and innovation in the fields of transportation technology, truck and heavy equipment and many programs dealing with electricity, electronics, hydraulics and pneumatics. We do not build simulators, we build training equipment that can be used for years. All of our educational training aids are built to better utilize instructors' time, to help students meet the requirements for their specific program and to prepare them to become a productive and successful part of the workforce.

We are devoted to the technical education industry. We employ former educators, we design and build training aids with educators in mind, and we take the concept of helping you teach technology very seriously by offering intuitive solutions through highly engineered and well-crafted training aids.

We partner with many organizations in the industry because we are passionate about developing the highest quality truck and heavy equipment technicians and assisting you in helping shape the future of the trades.

We thank you for this opportunity and encourage you to take time to look through this catalog to find intuitive solutions to today's transportation technology.



Kevin Boden, President

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EM-141S-TY01_053234 Engine Mechanical diagnosis trainer

This is a running engine with permanent, repeatable, measurable mechanical faults for your students to diagnose!

Designed to teach mechanical engine component failure diagnosis. A time-saving package allowing instructors to instantly provide a "turn-key" engine mechanical fault diagnosis.

- 2013-2016 Toyota Corolla North American model 1.8L 2ZR-FE engine with automatic transmission.
- Three "permanent" inserted industry common mechanical faults and one defective component fault that can be removed/replaced.
- Demonstrates all negative operational symptoms based on the faults.
- Saves significant instructor setup time.
- Includes curriculum and student exercises.



EM-145S-GM05_053331 Starting station, engine & swivel stand - 1.8L GM

Bring your engine mechanical program to life with a running engine!

Students can tear down and rebuild a GM Ecotec 1.8L LUW engine, gaining hands-on experience and mastering the intricacies of engine repair.

This product boosts engagement, evaluates practical skills, and creates intrinsic motivation.

- Vehicle platform: 2013-2015 Chevrolet Sonic, Engine: GM Ecotec 1.8L LUW.
- Starting station allows for rapid hookup and preparation to run each mechanical engine.
- Typical ratio of 5 engines to 1 starting station. (Add photo)
- Saves an enormous amount of instructor setup time.
- Leak-proof quick-connect fittings for fuel injection supply and return lines.



EM-200-28_053054 Driveshaft working angle trainer

- Variances in speed caused by the universal joint flexing can be audibly demonstrated using toothed wheels.
- Incorporates a slip clutch so the driveshaft can be handled and stopped by hand without injury.
- Different driveshaft angles can be selected using the adjustment system.



EM-1100_052340 Planetary gear set trainer

- Easy student visualization of planetary operation.
- Sun, ring gear and carrier can be held, driven, or allowed to react.
- Demonstration of seven gear ratios is available.
- Tabletop portability.
- Gear set diameter – 21"/53 cm.



EC-1106-01_052742 Cutaway allison transmission - 1000 series

- All clutches and bands activated by air pressure.
- Demonstrate all transmission speeds.



EC-431_053112 Cutaway open adjustable differential trainer

Provides visualization of:

- Backlash adjustment
- Pinion depth position
- Calculating gear ratio



EC-1120_053185 Cutaway hydraulic clutch system trainer

- Demonstrates complete hydraulic clutch system function.
- Tabletop portability.
- Cutaway allows visualization of clutch and pressure plate action.



EM-130_052793

Suspension and steering trainer

Complete Macpherson strut suspension, manual rack and pinion system in your classroom.

- Exaggerated, toolless camber/caster/toe adjustments.
- Adjust ride height and corner weights.
- Allows full range of motion of suspension.
- Includes magnetic camber/caster gauge.



EV-360_053325

ADAS (Advanced Driver Assist Systems) Trainer

Become part of an automobiles Advanced Driver Assistance System by viewing the information that all the ADAS sensors see!

- This trainer allows a student to visualize an assortment of actual sensor readings used in an ADAS assisted vehicle
- Comparing the strengths and weaknesses of the various sensors and technologies to one another
- Sensor Fusion is experienced by the student



EM-300-07_053249 SRS restraints & air bag diagnostic trainer

Teach supplemental restraints and airbags safely!

- Perform system analysis & diagnosis without the worry of airbag or seatbelt tensioner deployment.
- All inflators are already detonated, yet the circuits function as normal.

No more broken or worn-out connectors

- Every single connector has its own test points and a connector disconnect/connect switch.

What's in it for me?

- Time savings.
- Accessibility to a complete supplemental restraint system without disassembling a car.
- The size and portability of this trainer saves space in a cramped classroom and makes moving it to multiple classrooms easy.
- Student engagement.
- There is a fault for every circuit to enable students to troubleshoot the whole system.

Diagnosis

- No permanent codes.
- 26 faults for both SRS and multiplexing trigger OEM DTC's.
- All faults can be diagnosed using OEM service procedures & the fault location can be identified.

Support materials

- Operation manual
- Instructor manual including schematics and answer keys.
- Student assignments for the instructor.
- Breakout box terminal identifications with accompanying documentation to guide students.

Vehicle application

- 2015-2017 Honda Fit



EM-122-HN02_052621

Disc & drum ABS brake trainer with faults

Perform an ABS braking event & road test in your classroom.

- Students can feel the ABS activation through the brake pedal.
- All electrical, mechanical & hydraulic systems function as on the vehicle.

Real-world mechanical faults

- Measurable problems with brake pads, discs, and drums.

What's in it for me ?

- Time savings.
- Accessibility to a complete functional braking system.
- Pre-written student labs.
- Space.
- The size and portability of this trainer saves space in a cramped classroom and makes moving it to multiple classrooms easy.
- Repeatability

Diagnosis

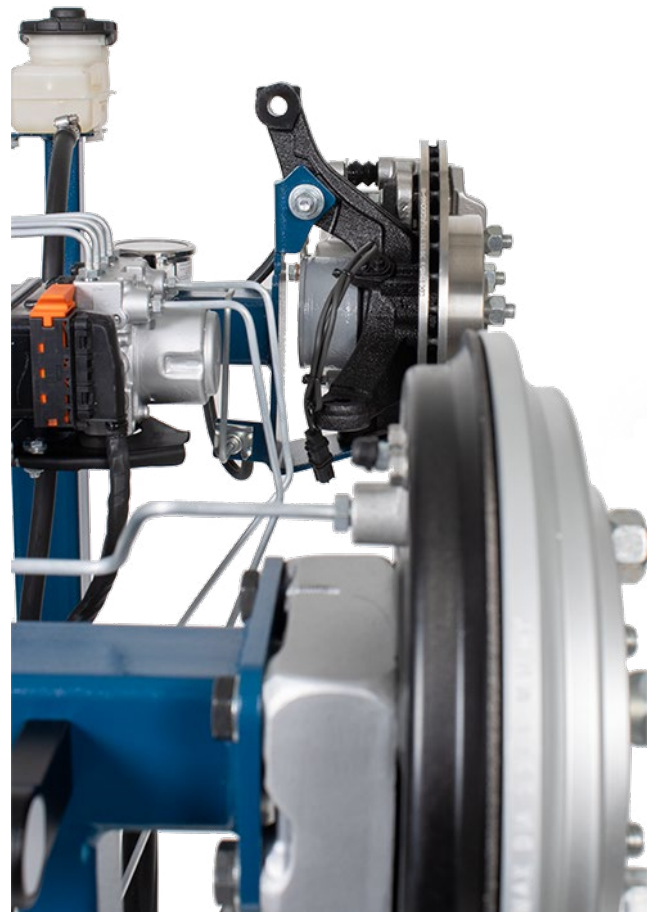
- No permanent codes.
- 6 electrical faults
- 4 mechanical faults

Support materials – more than just the trainer!

- Operation manual
- Instructor manual including schematics and answer keys.
- 16 student assignments
- Breakout box terminal identifications with accompanying documentation to guide students.

Vehicle application

- 2006-2010 Honda Civic



EM-123-2_053251 Two wheel hydraulic brake system

- Accessibility to a complete functional braking system.
- Pre-written student labs.
- The size and portability of this trainer saves space in a cramped classroom and makes moving it to multiple classrooms easy.



EM-123-4HN02_052746 Disc & drum brake trainer with faults

Real-world mechanical faults

- Measurable problems with brake pads, discs, and drums.

What's in it for me ?

- Time savings.
- Accessibility to a complete functional braking system.
- Pre-written student labs.
- Space.
- The size and portability of this trainer saves space in a cramped classroom and makes moving it to multiple classrooms easy.
- Repeatability

Diagnosis

Support materials – more than just the trainer!

- Operation manual
- Instructor manual including schematics and answer keys.
- 16 student assignments
- Breakout box terminal identifications with accompanying documentation to guide students.

Vehicle application

- 2006-2010 Honda Civic



MP-750_052808 Multiplex network diagnostic trainer

Help your students become multiplexing experts

Do you teach advanced networking classes?

Want to bring your students further?

Teaches advanced multiplex networks and diagnosis:

- Fully functional OEM CAN Bus system with all modules.
- For use with a scan tool and oscilloscope (required).
- 25-100 hours of instructional time (potential).

Teaches real-world diagnostic strategies for the following types of faults (12 total):

- Lack of communication.
- Voltage drops.
- Open circuits.
- All faults are diagnosable.

Industry leading curriculum package.

- Full curriculum guides student learning of: F CAN (hi-speed), B CAN (low-speed) & K-Line.
- 125+ pages of content, 17 student labs.
- Full schematics.
- A set of theory and lab exams with answer keys.

Saves teacher's time.

- Consistency across multiple units, easy setup, pre-written labs.
- Network communication wires have been run in a separate harness with special aftermarket connectors allowing for multiple disconnect and connect cycles without failure of terminals.

Proven design.

- Designed for the Worldskills competition.
- Robust hardware, additional connectors prevent damage.



AE-70-BK_053279 uScope digital storage oscilloscope - basic kit

- Small powerful single channel oscilloscope.
- Boots up in 4 seconds.
- 12-bit A/D converter, samples at 1 MHz.
- Includes test leads and charge cable.



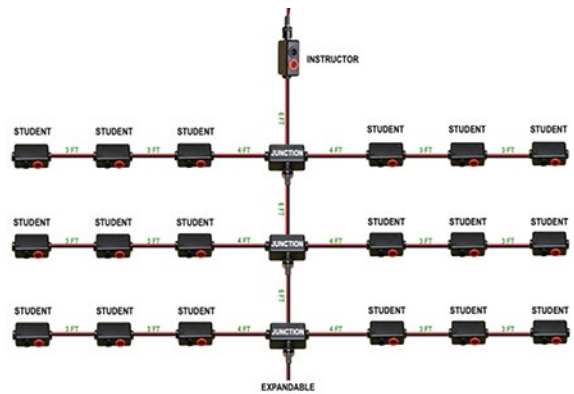
AE-71-MK_053280 uScope digital storage oscilloscope - master kit

- Small powerful single channel oscilloscope.
- Boots up in 4 seconds.
- 12-bit A/D converter, samples at 1 MHz.
- Includes carrying case, low amp probe, COP paddle & accessories.



AE-72-SD_053281 Signal distribution harness

- Flexible configurations for any classroom.
- Bring signals to each student.
- Easy to use BNC connectors.



AE-73-CK_053282 uScope classroom kit

- uScope master kit for instructor.
- 10 x basic uScope kits for students.
- Distribution harness.



CL-1902_053242

Electromagnetism trainer

Equip your students for the electrified future. Apply theory hands-on.

Do your students struggle with electricity? Do you have challenges capturing their attention and getting them interested in how electric motors work? Do you want to equip them with the skills and knowledge necessary to work on hybrid and electric vehicles?

The ConsuLab CL-1902 Electromagnetism trainer can help challenge your students and keep them engaged.

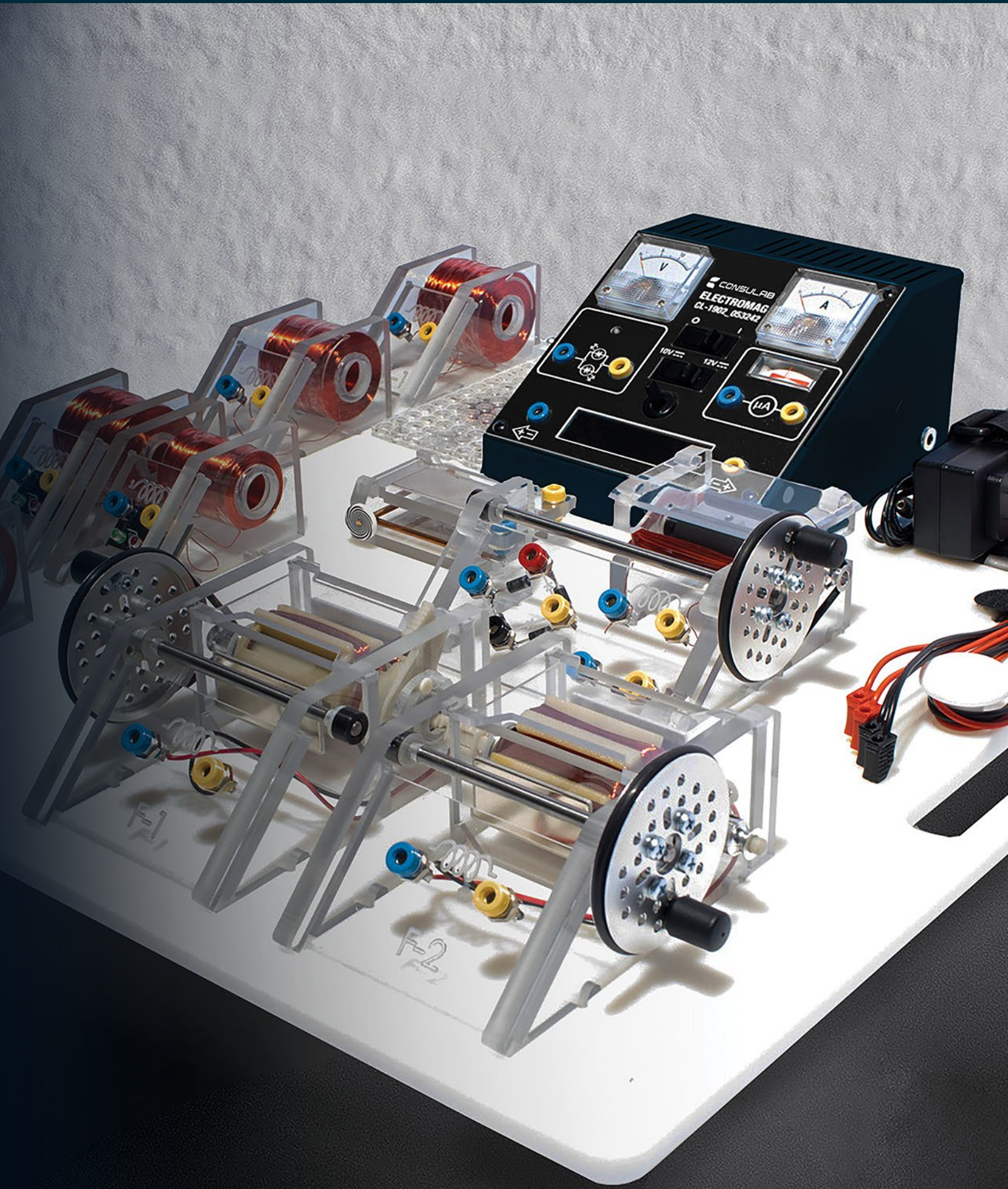
- Visualizes, teaches, and demystifies
- Coils
- Electromagnets
- Magnets
- Induction
- Right-hand rule
- AC generation
- Rectification
- DC motors
- Motor/generators
- Transformers
- Permanent magnets
- Solenoids

This trainer will challenge your students and keep them engaged.

- Minimal setup time < 5 minutes.
- Easy to inventory
- Provided student exercises and experiments guide students through learning process
- Up to 50+ hours of instructional time

Available as a classroom set (12 units, storage case plus extra consumables.)

(CL-1902-12_053286)



CL-1918-4S_053304
Automotive lighting system trainer
Hands-on learning for lighting systems

- Saves teacher's time.
- Students can begin building circuits with less than 5 minutes of introduction!
- Consistency across multiple units, easy setup, pre-written labs.
- Exquisite top-quality gold-plated jumper leads minimize voltage drops.
- Full answer keys for all exercises and tests.
- Industry leading curriculum package.
- Complete course on lighting systems.
- 400+ pages of content.
- 70+ student exercises, written at 3 different levels !
- Student tested, proven design.
- In use at hundreds of schools.
- Robust hardware.
- Protected power supply.
- Modular Moduponent® Design.
- Multiple configurations available to fit your class.
- Available as single sided, double sided, tabletop, combination with other trainers (multiplex, heavy truck etc.).
- Teaches diagnostic procedures.
- Electronic fault box with 12 faults.
- Voltage drops.
- Open circuits.
- All faults are diagnosable.



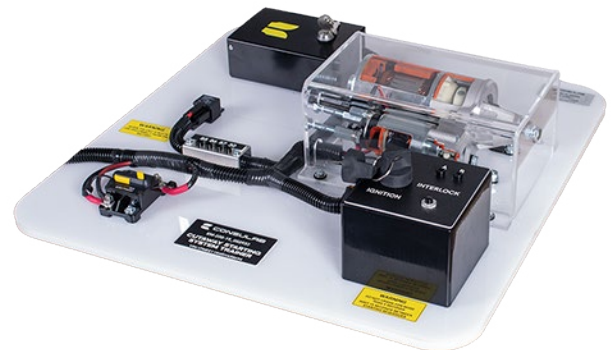
EC-520_052945 Cutaway battery

- Small (14A-A2) 12 V lead acid battery.
- Battery case is cutaway to view internal plates.
- No electrolyte present.
- Comes with curriculum.



EM-200-19_052932 Cutaway starting system trainer

- Cutaway starter that still operates.
- Students can see the solenoid plunger move, planetary gears rotate and sparks fly!
- Complete system includes ignition switch and relay.
- 4 faults to diagnose, test points throughout.
- All rotating components enclosed and safe.



MP-1918-1S_053040 single-sided CAN Bus multiplex trainer

Help your students become multiplexing experts

Are your students struggling with multiplexing? Build their understanding & diagnostic confidence hands-on!

Multiplexing made easy:

- Students perform wiring hands-on, building a 4-module multiplex system.
- Follows SAE J1939 protocols.

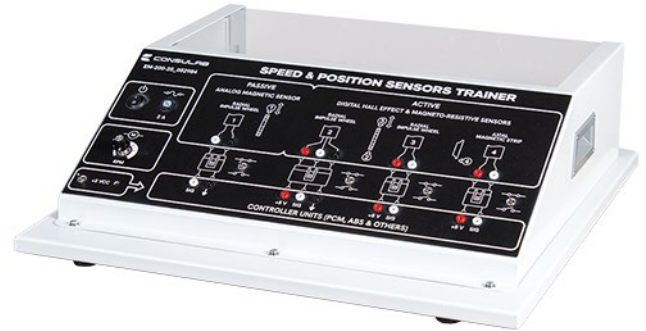
Teaches real-world diagnostic strategies:

- Electronic fault box with 12 faults.
- Lack of communication.
- Voltage drops.
- Open circuits.
- All faults are diagnosable.
- Industry leading curriculum package.
- Complete course on multiplex systems.
- 125+ pages of content, 20 student exercises
- Full schematics
- Saves teacher's time.
- Consistency across multiple units, easy setup, pre-written labs.
- Exquisite top-quality gold-plated jumper leads minimize voltage drops.
- Full answer keys for all exercises and tests.
- Student tested, proven design.
- In use at hundreds of schools.
- Robust hardware.
- Protected power supply.
- Available as single sided, double sided, tabletop, combination with other trainers (multiplex, heavy truck, etc.).



EM-200-25_052984 Speed & position sensors trainer

- Demonstrates the operation, diagnosis, and testing of common types of analog and digital speed and position sensors.
- Demonstrates analog and passive sensors; Magneto-resistive, hall effect, inductive.
- For use with an oscilloscope. (Required)
- Includes a complete curriculum with student exercises.
- Shaft with tone wheels and speed control.
- Uses real vehicle sensors.



CL-1930_053283 Connector Trainer - circuit and signal acquisition

A robust, reliable way to teach back-probing and oscilloscope use!

The Connector Trainer is not just a training aid; it's a purpose-built system designed for mastering the art of back-probing connectors, promoting intricate oscilloscope readings, and honing advanced diagnostic skills. It is the opposite of a breakout box; it provides the ideal learning environment for students to practice real-world back-probing techniques.

- Diverse signal exploration, from digital square waves to sine waves and variable voltage outputs.
- Practice oscilloscope use, using various time bases and voltage scales.
- 9 fault scenarios, demonstrating frequency changes, voltage drops, and the effects on electronics.
- Field serviceable, easily provisioned, and replaceable terminals and connectors.



CL-1919-06_053327

Ohm's law and DC circuits trainer

Best selling ConsuLab product ever! Student tested proven design.

In use at 500+ schools around the world

- Built-in adjustable protected power supply.
- All components protected against incorrect wiring & short circuits!
- 1000s of students have learned ohm's law using this trainer !
- Industry leading curriculum package.
- Complete course on Ohm's law, series parallel and more.
- 266 pages of content.
- 31 student exercises.
- 11 student tests.
- Proven robust hardware.
- All components fixed to trainer.
- Easily sourced consumables (#194, 3157 etc.)
- Built-in multimeter
- Saves teacher's time.
- Consistency across multiple units, easy setup, pre-written labs.
- Exquisite top-quality gold-plated jumper leads minimize voltage drops.
- Full answer keys for all exercises and tests.

Available as a classroom set (12 units, storage case plus extra consumables.)

(CL-1919-12_053205)



MD-4000-22_053343 Advanced electronics kit

- This is for teaching advanced electronics, after students have learned the basics of electricity and ohm's law.
- Fully self-contained.
- Student-led hands-on learning.
- Automotive electronics components.
- Industry leading curriculum package.
- 125+ pages of content, 17 student labs.
- Full schematics.
- Saves teacher's time.
- Consistency across multiple units, easy setup, pre-written labs.
- Modular design.
- Can be upgraded/changed over time.

Available in classroom sets.



MD-4000-23_053344 Drivability electronics kit

This trainer brings the fundamentals of engine performance sensors to the classroom environment. Equip your students with confidence before working on an engine bench or the real vehicle.

- Hands-on learning.
- Automotive drivability components.
- Saves teacher's time.
- Consistency across multiple units, easy setup.
- Modular design.
- Can be upgraded/changed over time.
- Industry leading curriculum package.

Available in classroom sets.



MD-4000-24_053345 HVAC electronics kit

This trainer brings the fundamentals of HVAC system electrical sensors to the classroom environment. Equip your students with confidence before working on an engine bench or the real vehicle.

- Hands-on learning.
- Automotive HVAC components.
- Saves teacher's time.
- Consistency across multiple units, easy setup.
- Modular design.
- Can be upgraded/changed over time.

Available in classroom sets.



EC-2001-07_053156 Cutaway hybrid scroll type A/C compressor

- 3-phase electric AC compressor cutaway.
- Driven by hand crank.
- Scroll compressor.



EC-2100_053053 Cutaway TXV H-block

- Allows easy visualization of valve function.



EM-2000-YF_053330 A/C system trainer

The ConsuLab EM-2000-YF R1234yf Air Conditioning trainer is a complete A/C system with unique features designed to enhance the instruction of air conditioning physics.

The trainer :

- Uses the H-Block TXV design with R1234yf flow control.
- Uses common automotive components.
- Can be used in both classroom and shop environments.
- Utilizes a hermetically sealed and internally protected compressor.
- Operates on 120V 15A 60Hz circuit.



EM-2000-OT_052941 A/C system with orifice tube

The ConsuLab EM-2000-OT Air Conditioning trainer is a complete A/C system with unique features designed to enhance the instruction of air conditioning physics.

The trainer :

- Uses the orifice tube design of refrigerant flow control.
- Uses common automotive components.
- Can be used in both classroom and shop environments.
- Utilizes a hermetically sealed and internally protected compressor.
- Operates on a 120V 15A 60Hz circuit.



EM-2000-TXV_052661 A/C system with TXV

The Consulab EM-2000-TXV Air Conditioning trainer is a complete A/C system with unique features designed to enhance the instruction of air conditioning physics.

The trainer :

- Uses the TXV (Thermal Expansion Valve) design of refrigerant flow control.
- Uses common automotive components.
- Can be used in both classroom and shop environments.
- Utilizes a hermetically sealed and internally protected compressor.
- Operates on a 120V 15A 60Hz circuit.



EM-2000-HB_053094 A/C system with H-block (TXV)

The Consulab EM-2000-HB Air Conditioning trainer is a complete A/C system with unique features designed to enhance the instruction of air conditioning physics.

The trainer :

- Uses the H-Block TXV design of refrigerant flow control.
- Uses common automotive components.
- Can be used in both classroom and shop environments.
- Utilizes a hermetically sealed and internally protected compressor.
- Operates on 120V 15A 60Hz circuit.



CONSULINK™

ConsuLink™ Student Learning Platform

You can now interact with ConsuLab product in the new following ways.

ConsuLink is another intuitive solution we now offer with some of our products. This tablet-based learning platform resonates with today's students as it has a familiar touchscreen interface and all assignments, faults, schematics and tasks are preloaded onto the tablet.

Reference information — No more hunting paperwork

- Component locator.
- Breakout Box pins.
- Videos.
- Operation manual.
- Wiring schematics.
- Safety warnings.

Student mode

Student case studies

We give the students the customer complaint and instructions for them to diagnose the problem.

Scenario numbers

Allow an instructor to assign students any pre-set fault or case study, without the students knowing what it is. Liberating instructor time.

Instructor mode

Instructor case studies

Gives you all the answer keys and reasoning for each student case study.

Instructor led lessons

Instructions and pre-sets prepared by educational experts like having a room full of mentors!

Faults & Schematics

Gives you all the information you need on each fault.

Manual fault insertion

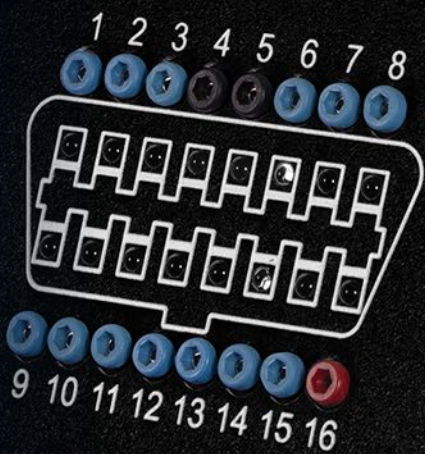
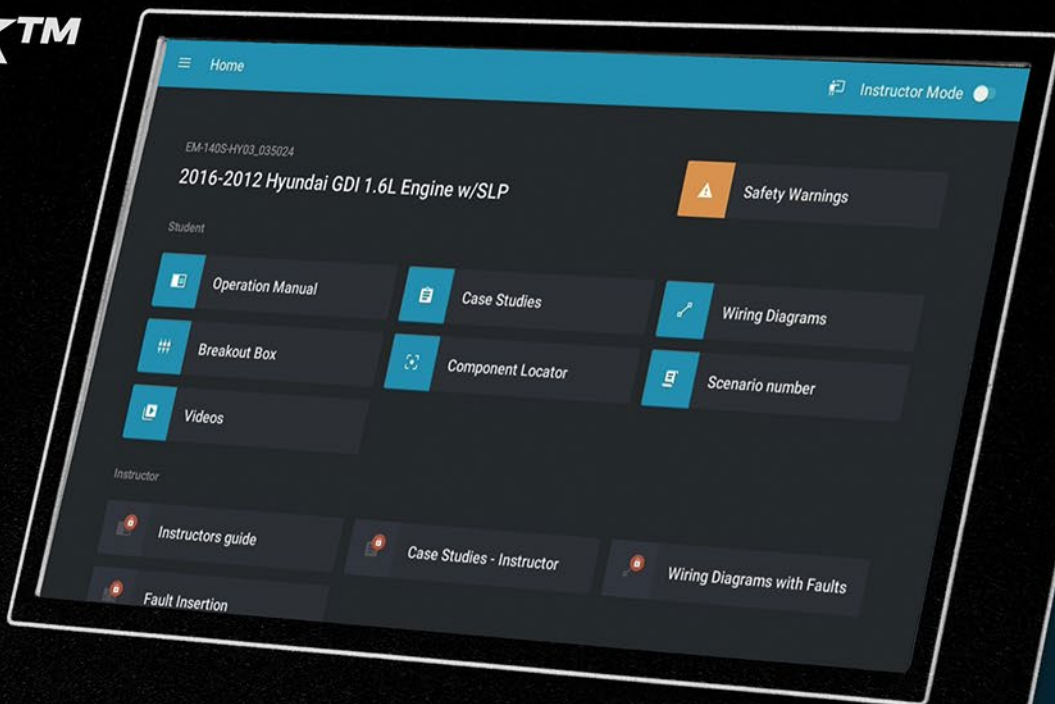
Ability to create your own customized case studies.

consulab.com

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CONSULINK™



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CONSULAB

HYUNDAI ACCENT 1.6L
EM-140S-HY03_035039

EM-140S-GM06_053338 ConsuLink™ GM 1.4L Engine trainer, AC & Stop-start

The first ever engine bench with functional stop-start system!

- Take your students for a road test !

Two pedals means you can do a road test* & Load test.

- See how misfires and data PIDs react to a stall test load.

ConsuLink™ student learning platform, a new way for you and your students to interact with the trainer.

- Case studies.
- Scenarios.
- Instructor lead lessons.
- All integrated into a touchscreen interface.

What's in it for me ?

- Time savings.
- Pre-set student activities, case studies, scenarios, and instructor lessons mean you can be setup and teaching rapidly with minimal prep time. .
- The size and portability of this trainer saves space in a cramped classroom and makes moving it to multiple classrooms easy.
- Student engagement.

Diagnosis

- No permanent codes in engine ECU.
- Dozens of faults, case studies and lessons for engine performance trigger OEM DTC's.

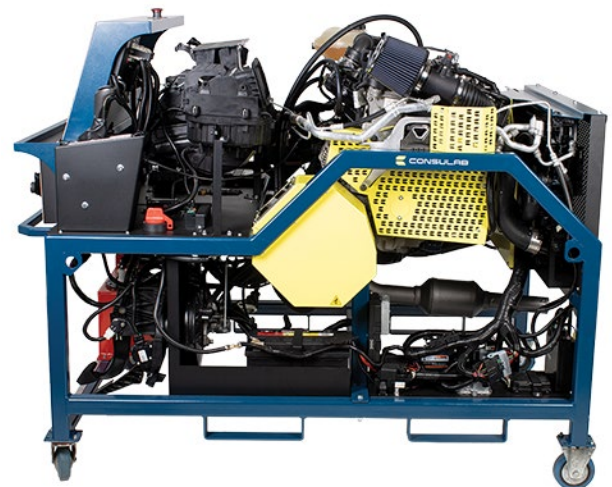
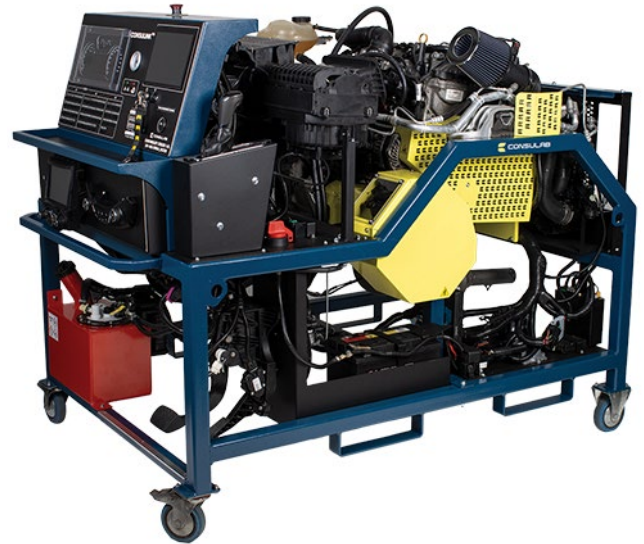
Support materials – more than just the trainer!

- Operation manual.
- Instructor manual including schematics and answer keys.
- Over 39 student activities.
- Breakout box terminal identifications with accompanying documentation to guide students.

Vehicle application

- 2016-2019 Chevrolet Cruze GM 1.4L with air conditioning and automatic transmission.

*Road test speed limited to 15mph (25kmh).



EM-140S-HY04_053339 ConsuLink™ 2016-2012 Hyundai GDI 1.6L engine

One of our most popular, smallest engine benches for engine performance – now with ConsuLink™!

ConsuLink™ Student learning platform including:

- Case studies.
- Scenarios.
- Instructor lead lessons.
- 50+ student activities.

Vehicle application

- 2012-2016 Hyundai Accent GDI 1.6L.



EM-330-1_052616 Fuel injection and GM engine management trainer

- Teaches engine advanced performance.
- Adjust four major sensors to demonstrate cause/effect: MAP, MAF, ECT & IAT.
- Visible fuel injectors and spray pattern.
- Includes complete curriculum, operation manual, instructor manual & student assignments.
- Fits in any classroom, no exhaust, no gasoline, no battery.
- Breakout box for easy oscilloscope measurements.

Vehicle application

- 2007-2010 GM 2.2L



ConsuLab Engine benches are optimal for demonstrating engine performance while saving space and setup time. We build our engine benches with OEM components (VIN included). Fault insertion maximizes student learning and diagnosis.

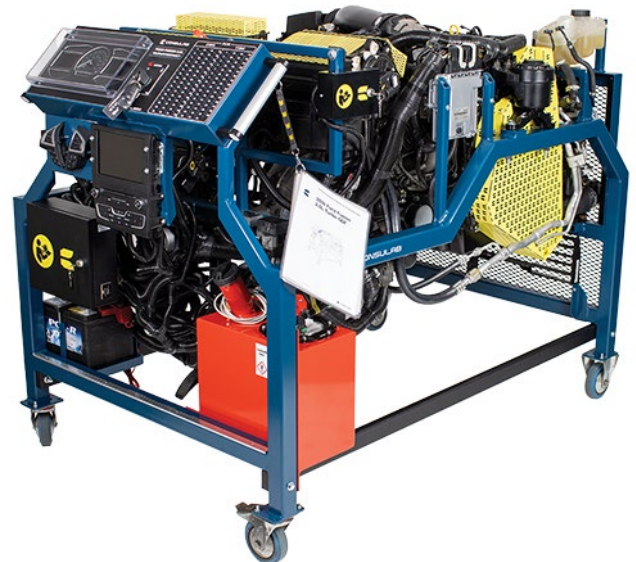
EM-140C-TY02A_035002 2018-2014 corolla 1.8L engine trainer with A/C

- Heat & A/C system (H-Block TXV) with clear sight glasses or pressure gauges
- Port fuel injection, double overhead camshafts with variable valve timing.



EM-140C-FD04A_035012 2015-2017 Fusion 2.0L engine trainer with A/C

- Includes complete HVAC system with clear sight glasses & pressure gauges
- Direct fuel injection, Turbocharged, double overhead camshafts with variable valve timing.



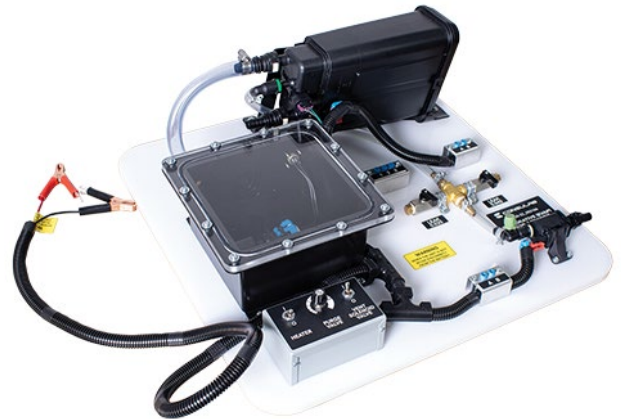
EM-140C-HN01A_035032 2015-2012 Civic 1.8L engine trainer with AC

- Includes complete HVAC system with clear sight glasses & pressure gauges
- Port fuel injection, double overhead camshafts with variable valve timing.



EM-200-22_052166 EVAP system trainer

- Demonstrates the operation, diagnosis, and testing of common EVAP (evaporative emissions) systems on North American vehicles.
- Includes two different leaks for use with smoke testing.
- Pressure sensor and heat lamp allow variation of signal.
- Includes a complete curriculum with student exercises.
- Uses real vehicle sensors.



EM-140D-FD02_035040 **2019-2017 F series 6.7L diesel engine trainer**

A complete running diesel engine, transmission & after treatment exhaust system without the truck.

Designed to teach diesel engine performance and diagnosis. A time-saving package allowing instructors to instantly provide a “turn-key” engine performance demonstrations and fault diagnosis.

- 2019-2017 Ford Powerstroke 6.7L
- Saves significant instructor setup time.
- Includes curriculum and student activities.



EM-140D-GM02_035027 **2019-2017 GM truck L5P 6.6L diesel engine trainer**

A complete running diesel engine, transmission & after treatment exhaust system without the truck.

Designed to teach diesel engine performance and diagnosis. A time-saving package allowing instructors to instantly provide a “turn-key” engine performance demonstrations and fault diagnosis.

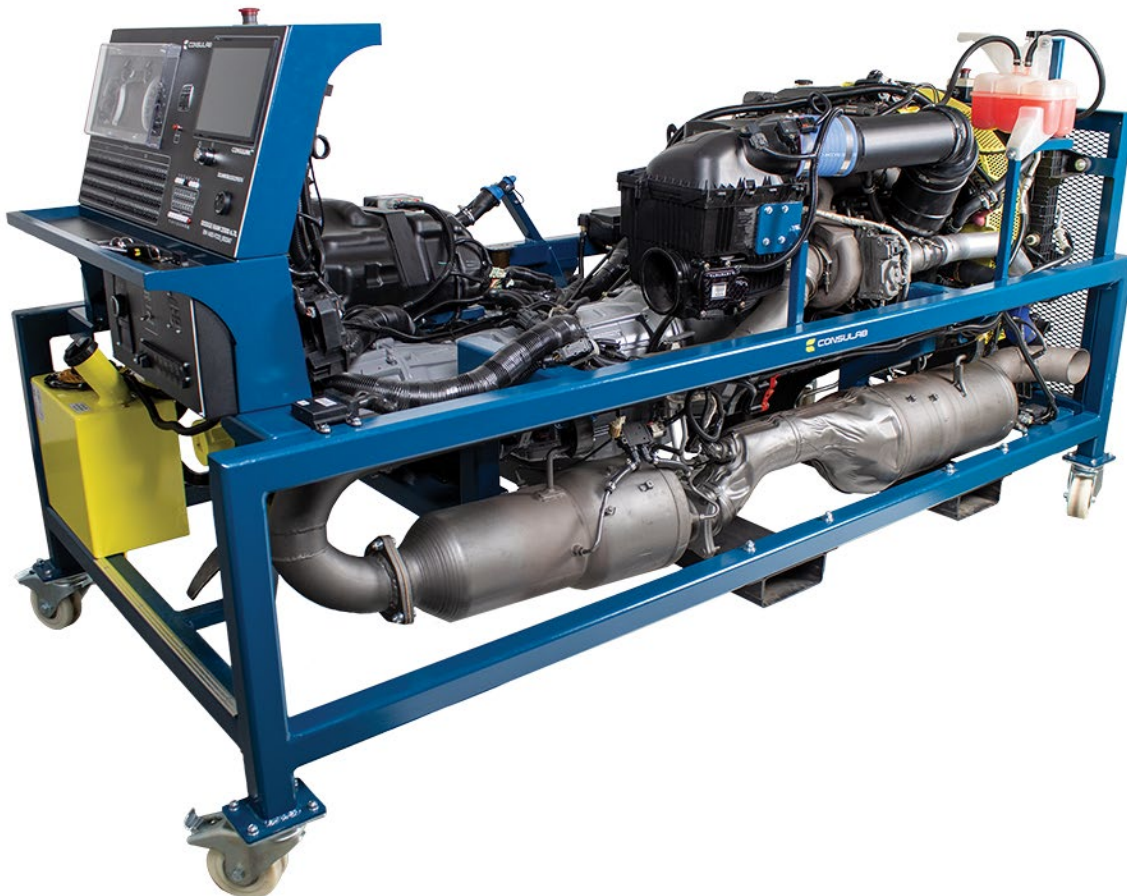
- 2019-2017 GM Duramax 6.6L V8 L5P.
- Saves significant instructor setup time.
- Includes curriculum and student activities.



EM-140D-FC03_053347 Consulink 2017 Ram 6.7L diesel engine trainer

Trainer equipped with tablet-based Consulink™ Student Learning Platform designed to enhance student engagement. Trainer is easy to work on and all major components, wiring and connectors match OEM configuration. It's equipped with safety guards covering all rotating components.

- 2017+ Ram 2500/3500 Truck with Cummins 6.7L Vin L turbo diesel engine compliant with EPA 2017 standards
- Saves significant instructor setup time.
- Consulink™ Student learning platform including:
 - Case studies.
 - Scenarios.
 - Instructor lead lessons.



L3 - Electric Vehicle Specialist / Light Duty Hybrid



EV-400_053287 EV High-Voltage Safety Trainer

Measure 400V DC in a completely safe, controlled, classroom environment.

Teach High-Voltage Safety in a compact classroom sized package through an intuitive, hands-on experiences for high-voltage testing, Personal Protective Equipment (PPE) use including gloves and insulated tools, **high voltage isolation testing** with a mega-ohmmeter, **high voltage interlock circuits**, first responders' loops, three phase motor control, high voltage power distribution, and much more.

The product has a **fault box** and a faulty component, allowing diagnostic practice. The system reacts as a real EV, demonstrating functions of various scenarios and components.

EV-400 transcends the limitations of traditional trainers. It's not just about demonstration; it's about active engagement, hands-on learning, and real-world application.

- Fault diagnosis 10 faults + 1 faulty component
 - High voltage loss of isolation
 - High voltage interlock loop
 - 12V supply problems
 - Air condition faults
 - PTC heater faults
 - Component faults
 - Harness faults
 - Contactor problems

This product is perfect for the following:

- Technical training programs: automotive, electrical engineering, emergency response.
- Educational institutions: motive power trades, vocational schools, community colleges, and high schools.
- EV manufacturers and repair shops: upskilling technicians and ensuring safety protocols.

The product includes student assignments, educational schematics and instructor schematics showing the faults.

Includes a PICO isolation meter and a set of large high voltage gloves.

Available as a classroom set (12 units and storage case) (EV-400-12_053355)

EC-140H_052944 Cutaway hybrid engine and drive train Prius

A complete hybrid drive system in your classroom !

Demonstrates the following driving modes:

- 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.
- Observe the CVT function of the power split device.



EM-200-29_053137 Hybrid planetary gear set trainer

Demonstrates power flow in a hybrid drivetrain.

- Students can direct power flow to determine the operation and interaction of different drive line components.
- Focuses on the planetary gear set system, or "Power-Split device".
- Operation manual with illustrated hybrid modes.



EV-601-TS_053322 Interactive Demonstrative Electric Vehicle

The EV-601 is a cutting-edge educational tool that brings the world of electric vehicles into the classroom.

Designed specifically for training purposes, this advanced vehicle offers a range of benefits to students, teachers, and educational institutions, through its interactive screens and full component layout. The EV-601 is a real-world Electric Vehicle (EV TESLA Model 3) that still retains all its functional systems and it's high voltage system has been replaced with Consulabs simulated safe High Voltage system.

The EV-601 provides a unique opportunity for students to engage in hands-on learning experiences through the Consulab interactive display and the protected high voltage test points throughout the vehicle. The biggest advantage of the EV-601, is it will have students learning the inner workings of an electric vehicle, drive systems, charging, thermal systems, battery systems without the risk associated with high voltage.

- HV Components: Inverter, contactors, DCDC, AC HV compressor, motor, HV cables, charger, PTC heater
- Thermal battery system components
- HV battery test points testing. (battery, steering, HVAC, Motor systems)
- Functional TESLA™ Service Mode
- Plug in charger.
- Battery management system
- HV cable layout
- Interlock function
- Isolation function
- ADAS system cameras and components
- First responder's functional loop

Teach real EV training with an EV vehicle in a safe and controlled vehicle

Minimal set up – Move EV-601 into a shop or lab and turn on power and set park brake.



Main Features of ConsuLab products

- Mobility
- Short set-up time
- Circuit components arranged in logical order
- Components and corresponding symbols are visible
- Occupies only a small area of the work bench
- Easily stored
- Additional components may be added to modules
- Designed with student safety in mind
- In tune with industry practices

Limited warranty

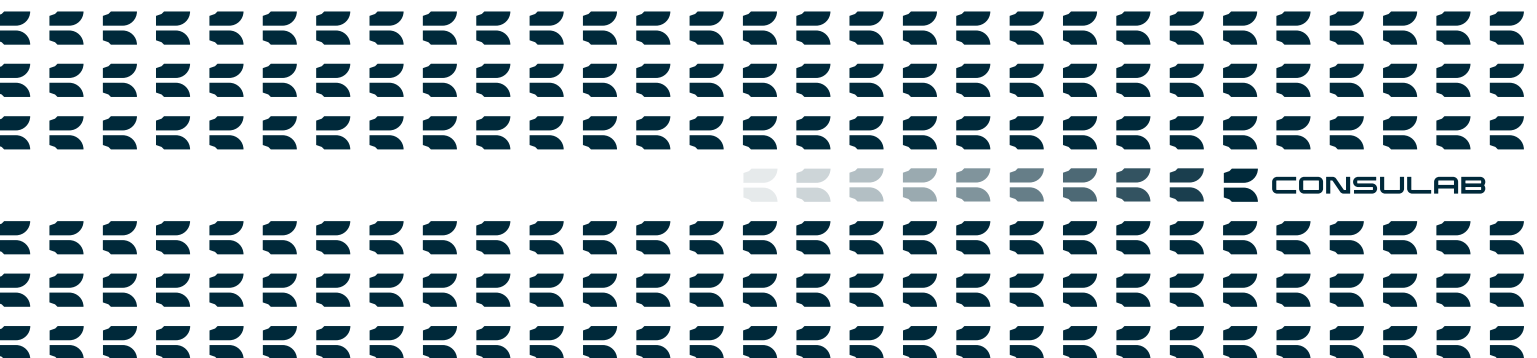
ConsuLab warrants that all systems which it manufactures are free from defects in workmanship and materials, provided that they are used under normal conditions and within the limits of the relevant specifications. This warranty is effective for one year from the date of delivery, and excludes any other warranty, whether oral or implied, such as (but not restricted to) any warranty as to fitness for a particular use.

ConsuLab will repair or replace at its sole discretion any part found to be defective during the period of the warranty. The liability of ConsuLab is limited to repairing or replacing parts in the system found to be defective and under no circumstances will ConsuLab assume responsibility for losses or other expenses which arise directly or indirectly from any malfunction of the system.

In no circumstances can ConsuLab be held liable for any personal injury or material loss or damage to any person or equipment, which is caused by any defect in the system other than as covered in this warranty. This warranty is not transferable. Any unauthorized modification in the system, or any falsification or removal of the serial number will immediately render this warranty null and void.

Catalog Contents

ConsuLab is not responsible for any missing or erroneous information contained in this catalog. Product images are non-contractual and provided for informational purposes only, and may not reflect the exact configuration of the final product. ConsuLab reserves the right to change or modify the contents of this catalog without notice.



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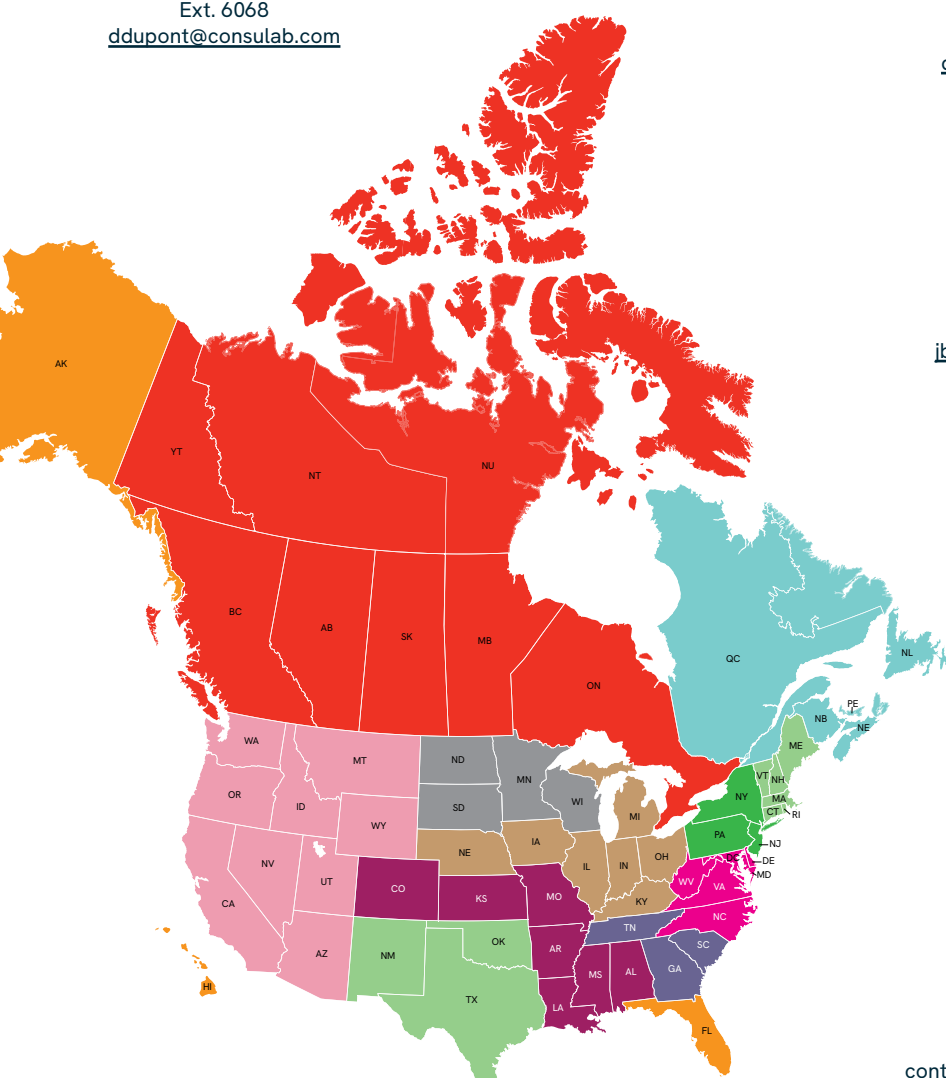
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