

Creating skilled **Automotive** engineers

Working with STEM

Complete Automotive Program

Aligned to NATEF

Knowledge and Skills Lessons



**LJ CREATE™**  
Learning for life

Working with STEM

 **AutoLab**

Age 16+

# → Welcome

We're LJ Create, Education Specialists since 1979

Since 1979 we have been providing award winning, world-class active learning solutions for technical education.

Today we create complete systems combining digital lesson libraries and tailor-made hardware kits that deliver **innovative, inspiring learning** in science, technology, automotive, and engineering.

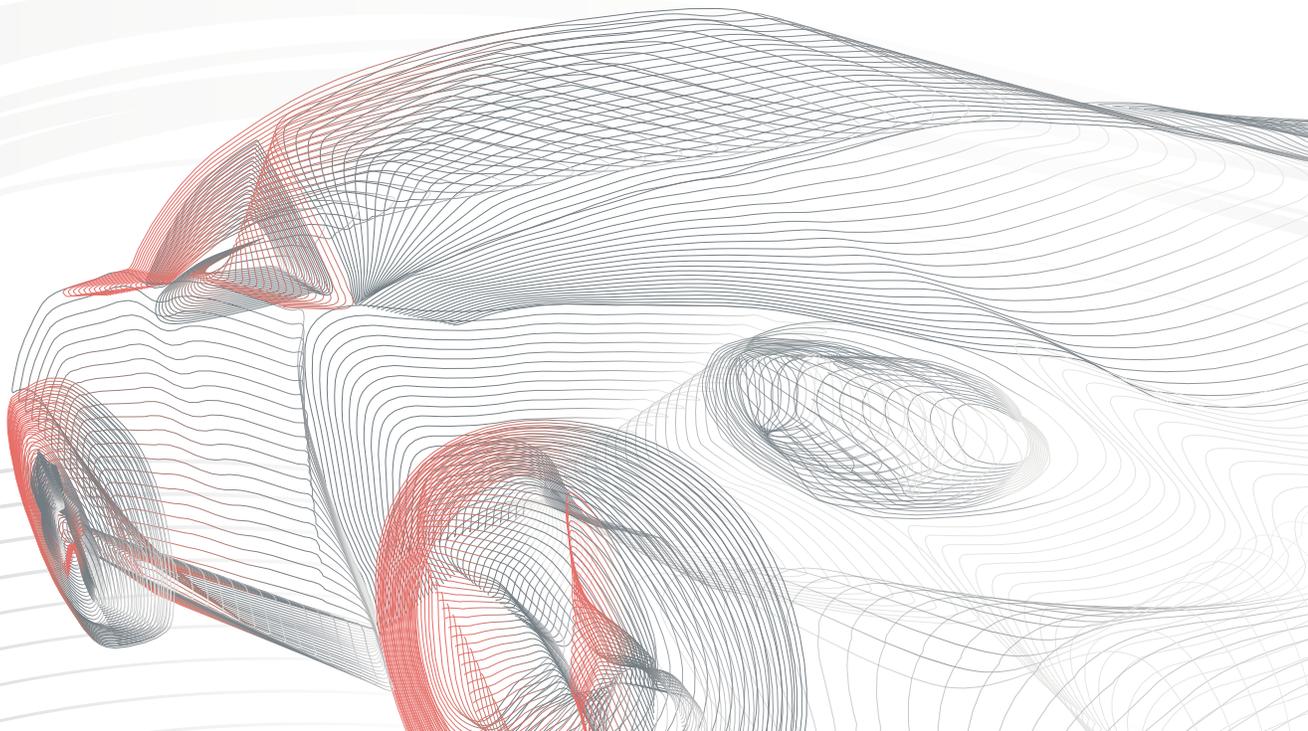
At LJ Create our mission is to enable learners throughout the world to achieve their full potential in a wide range of science and engineering areas by providing innovative teaching solutions for schools and further education.

**AutoLab** has been one of our flagship learning programs since 2001. This year, we are relaunching AutoLab alongside **Working with STEM**, our brand-new cloud-based library of over 4,300 vocational lessons.

The new AutoLab program is **a complete system of hardware and software for teaching automotive repair skills to NATEF standards**. Alternatively, our high-tech trainers and unique simulators could make a fantastic addition to an existing program in your high school or college.

Our skilled team of curriculum developers are automotive specialists; they produce up-to-date lesson plans, materials and assessments to make teaching and documentation easy.

To find out more about our hardware range of operational auto rigs, electronic panel trainers, sectioned trainers and more, please turn to **page 8**. If you want to see how our learning program aligns with NATEF standards, you can read more on **page 4**. Or, if you'd like to find out about our collection of lessons, please take a look at **page 6**.



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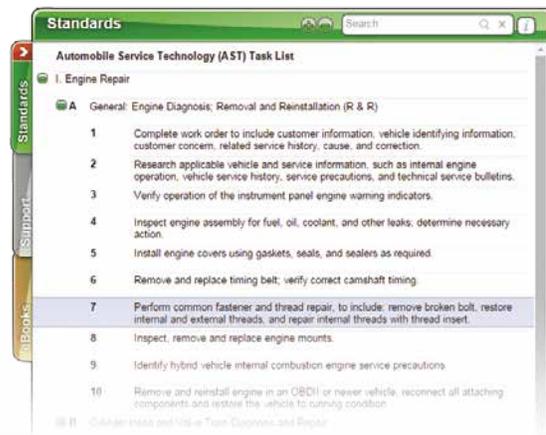


# → AutoLab and NATEF

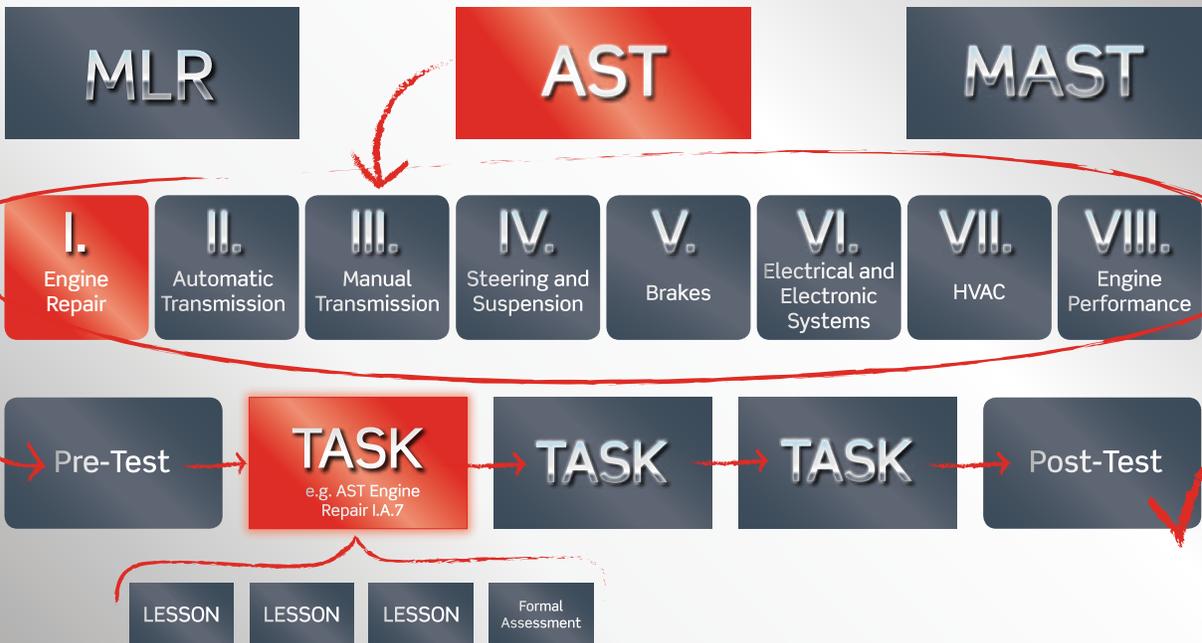
## AutoLab and NATEF: your learning journey

Inspired by NATEF's specific tasks and learning outcomes, the **AutoLab learning journey** equips your students with the skills, knowledge, and experience they need to become successful auto technicians.

The AutoLab learning journey follows the NATEF framework at every level; MLR, AST and MAST. In each subject area, for example Engine Repair, your AutoLab journey begins with the specific **tasks** and **learning outcomes** defined by NATEF.



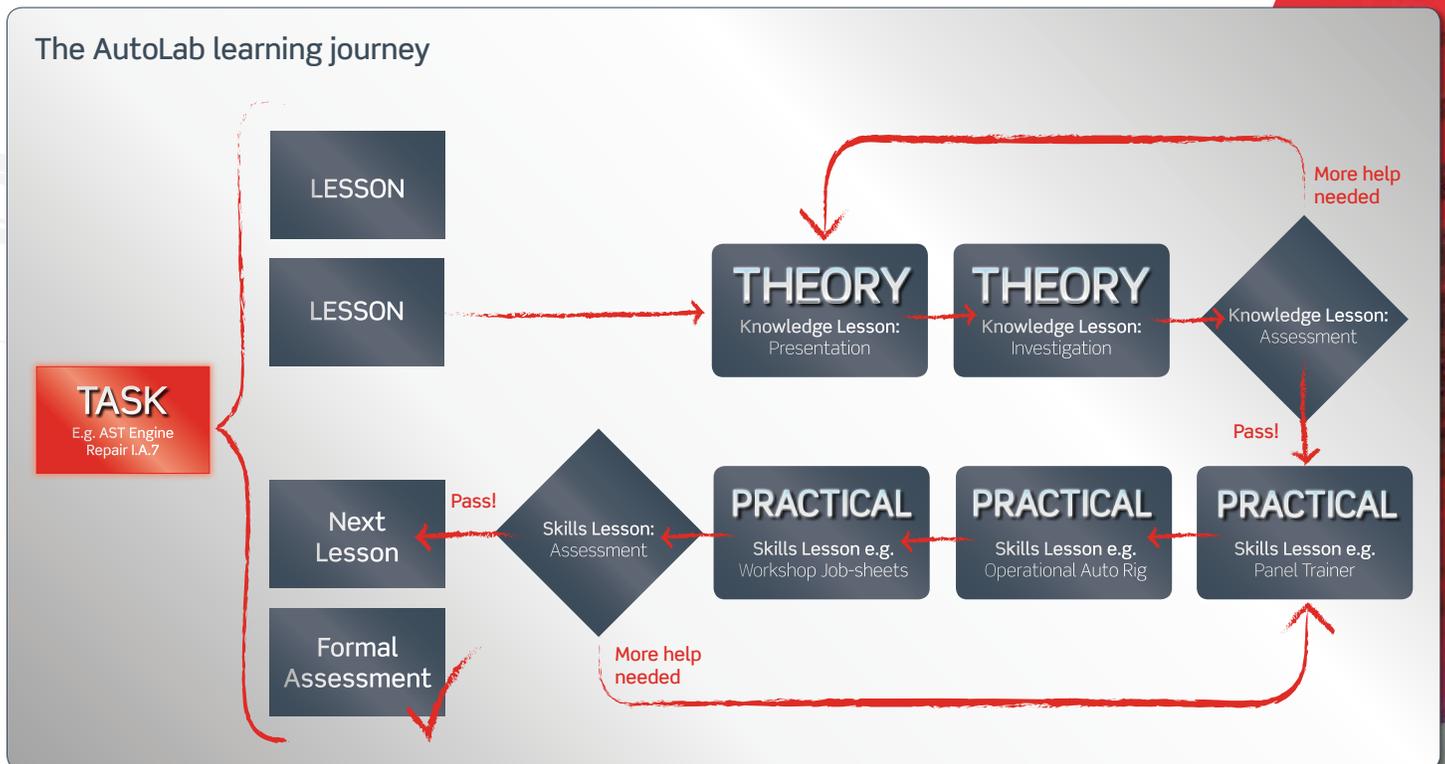
### The NATEF learning journey





AutoLab guides students through each lesson in the task, e.g. AST Engine Repair I.A.7, with a series of **Knowledge Lessons** in the form of presentations, simulations and investigations to reinforce a theoretical understanding of the subject area. At this point, you can confirm your students' knowledge with a short assessment.

Once students are confident, they can move on to practical **Skills Lessons** in the classroom or shop, using our operational auto rigs, panel trainers, board trainers, sectioned trainers, and shop activities including workshop job sheets. Again, you can confirm your students' knowledge with a short assessment. The process repeats with the next lesson in the task. When ready, students complete their **formal assessment** to conclude the task.

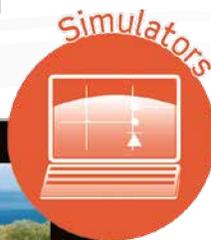
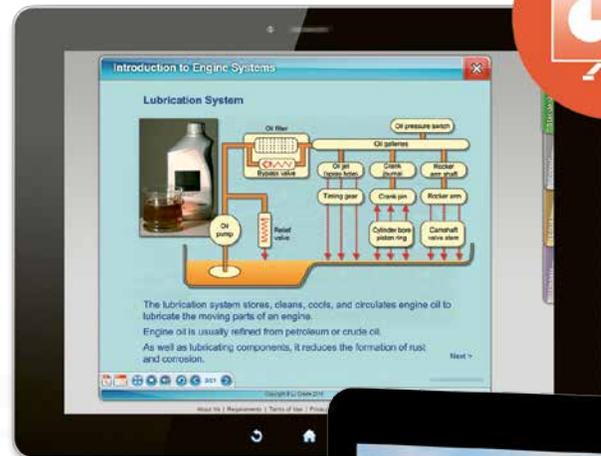


# → Knowledge Lessons

## The AutoLab digital library

The AutoLab **digital library** is a comprehensive resource for all the theory behind NATEF's specified subject areas. Students can access the library through an online portal; no specialist software or downloads are needed. An Internet connection and browser is all they require to access our collection of **Knowledge Lessons**.

Our Knowledge Lessons consist of **Presentations** for use in front of a class, or for students to refresh their knowledge individually; **Investigations** where students can put knowledge into practice with tasks and challenges; and **Assessments**, short quizzes with instant feedback so you can be confident that your students are ready to progress.



### Simulators

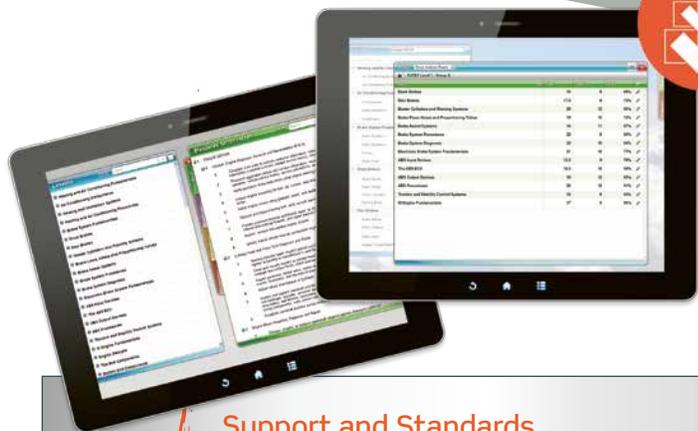
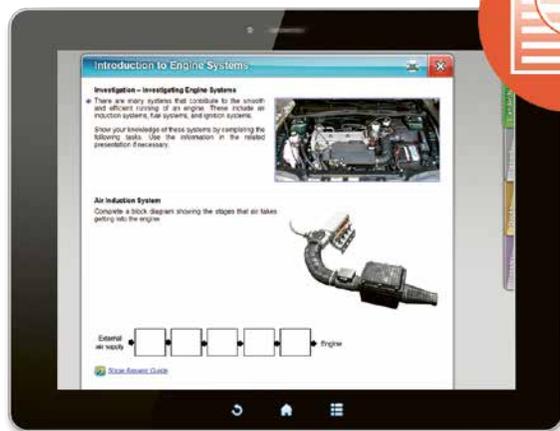
As well as lessons, our library includes several unique simulators of vehicle systems such as Hybrid Engines and CAN bus systems.



Standards



Investigations

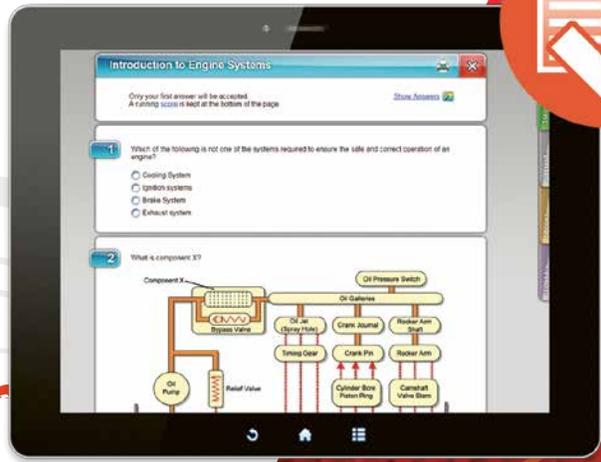


### Support and Standards

It's easy to see where our lessons align with NATEF: just use the Standards menu on the right to filter lessons by NATEF level, subject and task.

We also include academic support in the science and math concepts relating to each subject area. Just click on the Support tab for supporting lessons.

Assessments



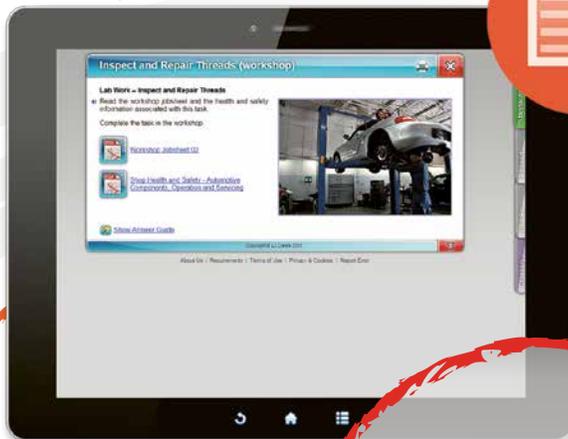
# → Skills Lessons

Guide your students from the classroom to the shop

What is involved in maintaining and repairing a modern vehicle? All modern cars use a complex CAN Bus network to control all of their electrical systems, from raising and lowering a window to stopping and restarting the engine automatically to save fuel. This level of complexity requires new skills to be learned by today's automotive students. In addition, the importance of traditional, hands-on mechanical knowledge and skills has not diminished.

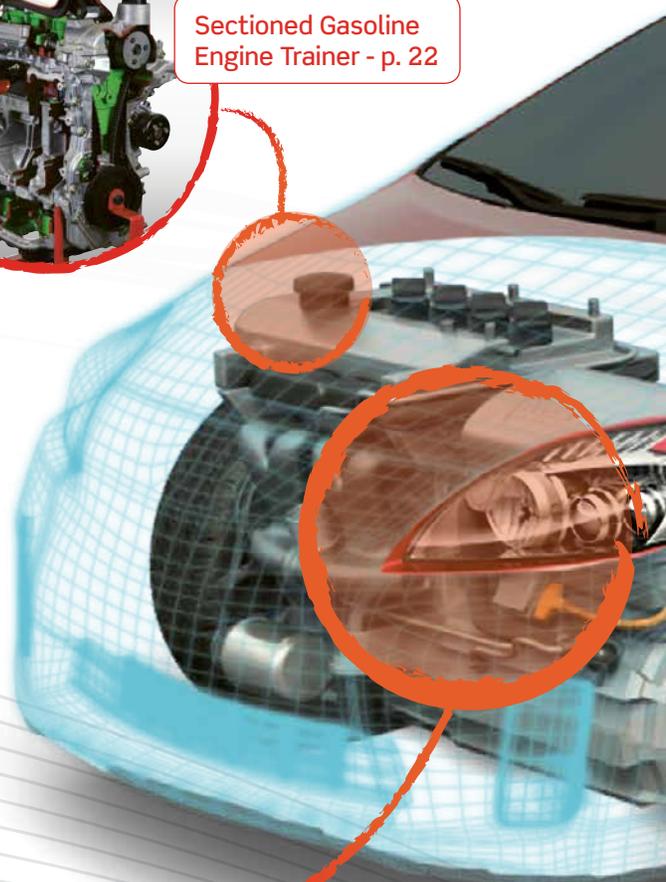
Our **Skills Lessons** are also found in our AutoLab Digital Library, and consist of practical activities that can be undertaken on our range of automotive training equipment, as well as shop job sheets, and health and safety guidelines.

Practical Tasks



Sectioned Gasoline Engine Trainer - p. 22

Lighting Circuits and Troubleshooting Board - p. 11



Our training equipment ranges from cut-away **sectioned trainers** that allow students to see what is happening inside working components, to desktop **trouble-shooting trainer boards and electronic panel trainers** that simulate complex automotive systems, through to fully-functioning **operational auto rigs and vehicle trainers**.

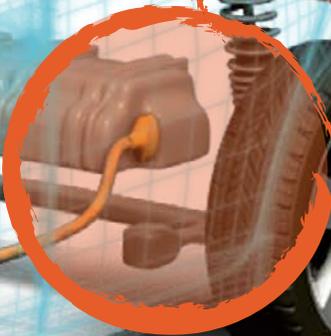
We don't just cater to light vehicles, please see page 24 - 26 for equipment for medium and heavy vehicle training.



Disc and Drum Braking System Trainer - p. 19



Hybrid Vehicle Trainer - p. 17



Steering and Suspension Trainer - p. 19

# → Light Vehicle Skills

On the following pages you can find our selection of **light vehicle hardware kits, rigs, and trainers** which have been mapped to the appropriate NATEF tasks on our pull-out crosswalk. On each page you'll also find a mini-matrix to help you work out which equipment you need in your classroom, lab, or shop.

Our hardware is designed to provide comprehensive hands-on troubleshooting practice, helping your students gain the real-world skills they need for a **successful career in the automotive industry.**

Our innovative range of autotronics trainers teaches serial bus troubleshooting techniques, giving students valuable access to post-2000 motor vehicle technology. Whatever your NATEF teaching requirements, our hardware has got it covered!



As well as the 8 NATEF topic areas, our digital library contains lessons on health and safety and professional skills.

## Autotronics Boards

Our new range of autotronics boards present **a practical approach to theoretical learning.** Your students can confidently develop diagnostic skills from the safety of the classroom.

Faults can be introduced to the system of each board via a fault code, which highlights the area that should be investigated in order to solve the problem. The trainers are protected with a hinged cover and are stackable for easy storage.

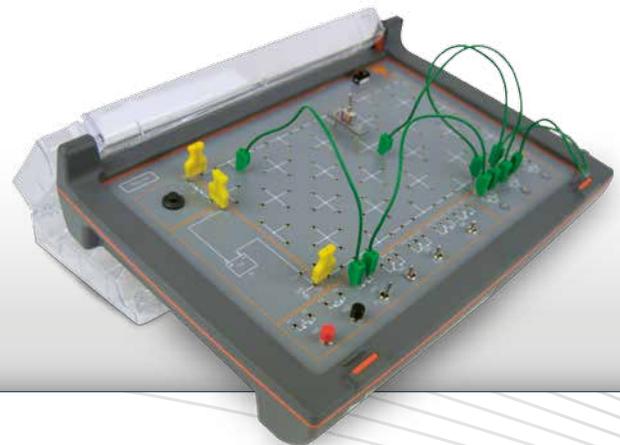


### Automotive Electronic Circuits Board

Order as: 700-10

Typical practical tasks and topics include:

- Measure and construct simple circuits
- Investigate the operation of battery, fuse, switch and lamp components
- Ohm's Law and resistance
- Switches in series and parallel



	700-10	720-02	701-02	721-01
I. Engine Repair				
II. Automatic Transmission				
III. Manual Transmission				
IV. Suspension and Steering				
V. Brakes				
VI. Electrical & Electronic Systems				
VII. HVAC				
VIII. Engine Performance				

### Lighting Circuits and Troubleshooting Board

Order as: **701-02**

Typical practical tasks and topics include:

- CAN bus lighting systems and CAN signals
- CAN control of lighting circuits: headlamp, brake, reverse, dipped beams, hazard warning lights, direction indicators, automatic lighting
- Finding and diagnosing CAN lighting faults



### Starting and Charging Troubleshooting Board

Order as: **720-02**

Typical practical tasks and topics include:

- CAN conventional and advanced starting and charging systems
- Automatic stop start systems
- The CAN data bus
- CAN bus measurement



### Auxiliary Systems Circuits and Troubleshooting Board

Order as: **721-01**

Typical practical tasks and topics include:

- CAN bus window, mirror, and seat systems
- CAN bus central locking system
- CAN data bus
- Finding and diagnosing CAN auxiliary faults



# Autotronics Panel Trainers

Our innovative computer-linked panel trainers give students and instructors the opportunity to **demonstrate and investigate a range of simulated vehicle operations**. These trainers are designed to be used in a classroom environment with test points at a safe voltage level.

To facilitate the development of diagnostic and fault-finding skills, these panels include a range of fault insertion options to simulate typical real-world system malfunctions. Your students can perform troubleshooting tasks on the system using diagnostic equipment.

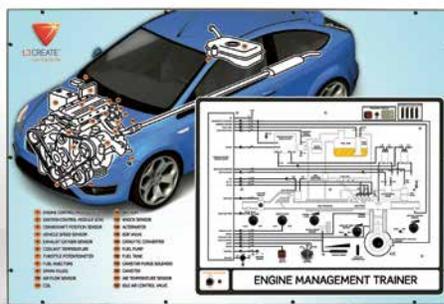


## Engine Management Systems Panel Trainer

Order as: **751-01**

Typical practical tasks and topics include:

- Recognize common sensors found in the engine bay
- Investigate sensor signals and diagnose faults
- Identify the operation of injectors and fuel pumps
- Identify the operation of emissions systems
- Manual or automatic fault insertion



## Displays and Accessories Panel Trainer

Order as: **752-01**

Typical practical tasks and topics include:

- Diagnose audible warning faults
- Diagnose faults in interior and headlamp circuits
- Investigate engine and vehicle speed sensor signals
- Understand and explain operation of the tachometer
- Manual or automatic fault insertion



# NATEF Crosswalk

Do you want to find out exactly where our light vehicle hardware aligns to the NATEF tasks you need to teach? The NATEF crosswalk is for you!

Simply pull it from the centerfold, and use it to match each piece of our light vehicle equipment to the relevant NATEF tasks.

			Panel Trainers		System Rig	Sectioned Rigs			
			p. 12	p. 17	p. 20	p. 22	p. 22	p. 23	p. 23
			752-01	756-01	765-01	772-01	773-01	774-01	775-01
I. Engine Repair	MLR	AST	MAST						
	1.A.1	1.A.2	1.A.2				•	•	
	1.A.2	1.A.3	1.A.3	•					
	1.A.3	1.A.4	1.A.4				•	•	
	1.A.5	1.A.6	1.A.6				•		
		1.B.1	1.B.1				•		
		1.B.2	1.B.2				•		
		1.B.3	1.B.3				•		
	1.B.1	1.B.4	1.B.4				•		
		1.B.5	1.B.5				•		
			1.B.10				•	•	
			1.B.11				•	•	
			1.B.13				•		
			1.C.2				•	•	
			1.C.3				•	•	
			1.C.6				•		
			1.C.7			•	•	•	
			1.C.8				•	•	
			1.C.12				•	•	
			1.C.13				•		
			1.C.14				•	•	
		1.C.1	1.D.1	1.D.1	•				
		1.C.2	1.D.3	1.D.3			•		
		1.D.9	1.D.9	•					
		1.D.12	1.D.12	•					
II. Automatic Transmission		2.C.1	2.C.1						•
		2.C.3	2.C.3						•
	2.C.2	2.C.5	2.C.5		•				
			2.C.6						•
			2.C.13						•
			2.C.15						•
III. Manual Transmission		3.C.1	3.C.1					•	
			3.C.3					•	
			3.C.4					•	
			3.C.6					•	
	3.E.1	3.E.1	3.E.1					•	
			3.E.6					•	
			3.E.7					•	
			3.E.11					•	
		3.E.12					•		

# NATEF Crosswalk

				Panel Trainers			System Rigs			
				p. 12	p. 12	p. 17	p. 19	p. 19	p. 21	
				751-01	752-01	755-01	763-01	764-01	784-01	
IV. Suspension and Steering	MLR	AST	MAST							
			4.A.2						•	
	4.B.8							•		
	4.A.2	4.B.1	4.B.1						•	
		4.B.2	4.B.2					•	•	
		4.B.3	4.B.3					•		
		4.B.5	4.B.5					•		
		4.B.6	4.B.6					•		
		4.B.7	4.B.7					•		
		4.B.8	4.B.8					•		
		4.B.9	4.B.9					•		
		4.B.10	4.B.10					•		
		4.B.11	4.B.11					•		
		4.B.17	4.B.17					•		
		4.C.6	4.C.6					•		
		4.C.10	4.C.10					•		
		4.D.1	4.D.1					•		
	V. Brakes		5.A.0	5.A.1		•		•		
5.A.1		5.A.3	5.A.3			•				
5.B.1		5.B.2	5.B.2			•				
		5.B.10	5.B.10							
5.B.5		5.B.11	5.B.11		•	•				
5.C.1		5.C.2	5.C.2					•		
5.C.3		5.C.4	5.C.4					•		
5.C.5		5.C.6	5.C.6					•		
5.D.1		5.D.2	5.D.2					•		
5.D.2		5.D.3	5.D.3					•		
5.D.3		5.D.4	5.D.4					•		
5.D.4		5.D.5	5.D.5					•		
5.D.5		5.D.6	5.D.6					•		
5.D.6		5.D.7	5.D.7					•		
5.F.2		5.F.3	5.F.3					•		
5.F.4		5.F.5	5.F.5			•				
		5.G.1	5.G.1			•				
			5.G.8	•		•				





				Autotronics Boards				Panel Trainers			System Rigs		
				p. 10	p. 11	p. 11	p. 11	p. 12	p. 17	p. 17	p. 18	p. 20	p. 21
				700-10	701-02	720-02	721-01	752-01	754-01	756-01	760-02	766-01	784-01
VI. Electrical/Electronic Systems	MLR	AST	MAST										
	6.A.2	6.A.2	6.A.2	•									
	6.A.3			•									
	6.A.4	6.A.3	6.A.3	•		•							
	6.A.5	6.A.4	6.A.4		•	•	•						
		6.A.7	6.A.7	•	•	•	•						
		6.A.10	6.A.10	•		•	•						
			6.A.14			•	•						
			6.A.15			•	•						
	6.B.7	6.B.7	6.B.7							•			
	6.B.9	6.B.9	6.B.9							•			
	6.C.2	6.C.2	6.C.2			•							
	6.C.3	6.C.3	6.C.3			•							
	6.D.1	6.D.1	6.D.1			•							
		6.D.2	6.D.2			•							
	6.D.4	6.D.5	6.D.5			•							
		6.E.1	6.E.1			•		•					
	6.E.1	6.E.2	6.E.2		•			•					
		6.F.1	6.F.1					•					
		6.H.1	6.H.1					•					
		6.H.2	6.H.2					•					
		6.H.4	6.H.4										•
		6.H.5	6.H.5										•
		6.H.7	6.H.7		•	•	•	•					
6.F.3	6.H.8	6.H.8				•							
6.F.4	6.H.9	6.H.9						•					
VII. Heating and Air-conditioning		7.A.1	7.A.1						•				
	7.A.1	7.A.2	7.A.2								•		
		7.A.3	7.A.3									•	
		7.A.5	7.A.5								•		
	7.B.1	7.B.1	7.B.1						•				
	7.B.2	7.B.4	7.B.4						•				
	7.C.1	7.C.1	7.C.1						•				
			7.C.3					•					
		7.D.1	7.D.1					•	•				
		7.D.3	7.D.3					•					
		7.D.4	7.D.4					•					
	7.D.1	7.D.6	7.D.6						•			•	
	7.D.2	7.D.7	7.D.7						•				
		7.D.8	7.D.8					•					
		7.E.1	7.E.1									•	
		7.E.2	7.E.2									•	
	7.E.3	7.E.3									•		
	7.E.4	7.E.4									•		

# NATEF Crosswalk

	MLR	AST	MAST	Panel Trainers		System Rigs			
				p. 12	p. 12	p. 18	p. 18	p. 20	p. 20
				752-01	751-01	760-01	760-02	765-01	767-02
VIII. Engine Performance		8.A.1	8.A.1			•	•		
	8.A.1	8.A.2	8.A.2			•	•		
		8.A.3	8.A.3			•	•		
	8.A.6				•				
		8.A.9	8.A.9			•	•		
		8.A.10	8.A.10	•	•				
	8.B.1	8.B.1	8.B.1		•				
		8.B.3	8.B.3			•	•		
			8.B.5			•	•		•
			8.B.6			•	•		
			8.B.7	•		•	•		•
		8.C.1	8.C.1			•	•	•	•
		8.C.2	8.C.2			•		•	
		8.C.3	8.C.3			•			
			8.D.1			•	•		•
		8.D.2	8.D.3			•	•	•	•
	8.D.2	8.D.4	8.D.5				•		
		8.D.6	8.D.7		•	•			•
		8.D.7	8.D.8			•			
		8.E.5	8.E.8		•				



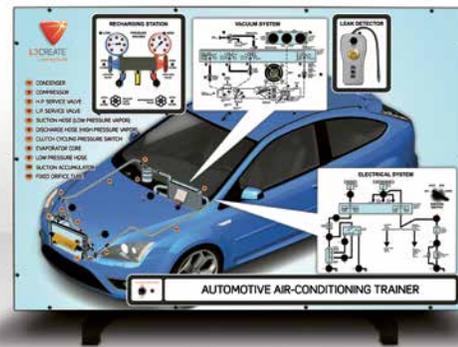
	751-01	752-01	754-01	755-01	756-01
I. Engine Repair					
II. Automatic Transmission					
III. Manual Transmission					
IV. Suspension and Steering					
V. Brakes					
VI. Electrical & Electronic Systems					
VII. HVAC					
VIII. Engine Performance					

### Air Conditioning Systems Panel Trainer

Order as: 754-01

Typical practical tasks and topics include:

- Investigate the operation of the refrigerant cycle
- Describe the six principles of heat transfer
- Investigate pressures within a FOTCC system
- Diagnose overcharging and moisture faults
- Manual or automatic fault insertion

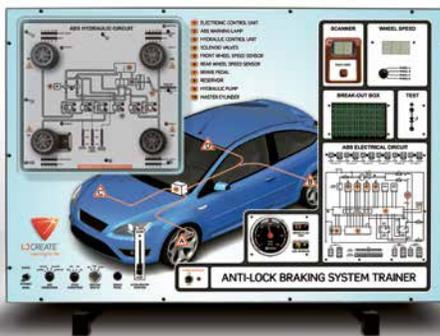


### Anti-Lock Braking Systems Panel Trainer

Order as: 755-01

Typical practical tasks and topics include:

- Principles of braking system and vehicle acceleration/deceleration
- Identify ABS input and output circuits and signals
- Investigate the effects of wheel slip on ABS action
- Investigate signals produced by inductive sensors



### Hybrid Vehicle Systems Panel Trainer

Order as: 756-01

Typical practical tasks and topics include:

- Investigate the operation of a planetary gear set
- See the power flow between hybrid components
- Investigate a hybrid high voltage circuit
- View diagnostic trouble codes
- Manual or automatic fault insertion



## Automotive System and Component Rigs

Many automotive technology concepts are best taught using **fully functioning vehicle component rigs**, where an instructor can show students a wide variety of diagnostic and maintenance techniques.

Your students are able to perform tasks on systems without the need for a complete vehicle. In some cases, this means practical tasks can also take place in the classroom, as pictured.

Here, some high school CTE students are using our Disc and Drum Braking System Trainer to practice maintenance techniques.



### Duratec Engine (CAN Control) Trainer

Order as: [760-01](#)

Typical practical tasks and topics include:

- Engine management system fundamentals
- The position and mounting of all engine components
- The electronic control unit (ECU)
- Sensor and actuator components
- Pressurized fuel systems



### Duratec Engine (CAN and Climate Control) Trainer

Order as: [760-02](#)

Typical practical tasks and topics include:

- Engine management system fundamentals
- The position and mounting of all engine components
- The electronic control unit (ECU)
- Climate-control system



### Disc and Drum Braking System Trainer

Order as: **763-01**

Typical practical tasks and topics include:

- Friction brake theory and practice
- Drum brake components and operation
- Disc brake components and operation
- Drum brake machining and servicing
- Disc measurement and inspection



### Toyota Yaris VVTI Engine Trainer

Order as: **761-01**



### Common Rail Diesel Engine (CAN Control) Trainer

Order as: **762-01**



	760-01	760-02	763-01	764-01
I. Engine Repair				
II. Automatic Transmission				
III. Manual Transmission				
IV. Suspension and Steering				
V. Brakes				
VI. Electrical & Electronic Systems				
VII. HVAC				
VIII. Engine Performance				

### Steering and Suspension System Trainer

Order as: **764-01**

Typical practical tasks and topics include:

- Inspect steering shaft universal joint, flexible coupling, collapsible column, lock cylinder mechanism, and steering wheel
- Disassemble, inspect and reassemble rack and pinion steering gear



### Distributorless Ignition System Trainer

Order as: 765-01

Typical practical tasks and topics include:

- Ignition system fundamentals
- The ignition primary and secondary circuits
- Breakerless ignition systems
- Electronic ignition systems, service and diagnosis
- Ignition systems timing

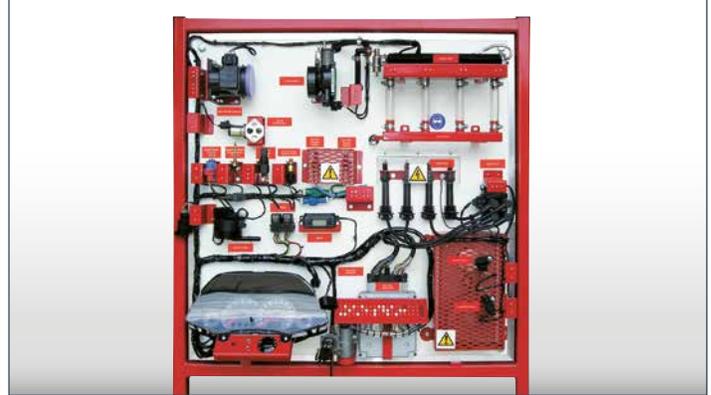


### Electronic Fuel Injection System (Wet) Trainer

Order as: 767-02

Typical practical tasks and topics include:

- Engine management system fundamentals
- The electronic control unit (ECU)
- Sensor circuits and components
- Actuator circuits and components
- Intake air temperature control systems



### Air Conditioning System Trainer

Order as: 766-01

Typical practical tasks and topics include:

- Identifying A/C components and operation
- Identifying refrigerant types
- Conduct an A/C system performance test
- Identify and recover A/C system refrigerant
- Evacuate and charge A/C system



### Anti-Lock Braking System (Bosch) Trainer

Order as: 769-01



### Electronic Fuel Injection System (Dry) Trainer

Order as: 767-01



### Supplemental Restraint System Trainer

Order as: **784-01**

Typical practical tasks and topics include:

- Investigate the differences between fired and non-fired belt tensions.
- Identify typical symptoms of faults in a supplemental restraint system.
- Identify error codes in an SRS ECU.



### Vehicle Electrical Systems Trainer

Order as: **770-01**



### HDI Common Rail Fuel Injection System

Order as: **771-01**



	765-01	766-01	767-02	784-01
I. Engine Repair				
II. Automatic Transmission				
III. Manual Transmission				
IV. Suspension and Steering				
V. Brakes				
VI. Electrical & Electronic Systems				
VII. HVAC				
VIII. Engine Performance				



## Sectioned Component Rigs

Exposing the inner workings of components provides a safe and accessible way of viewing how complex systems are constructed - **key components are color-coded for easy identification.**

Our cut-aways are fitted with hand cranks to enable students and teachers to see how components interact with each other to create a fully working system.

These sectioned rigs are ideal for classroom demonstrations, or you could use them in the shop as a handy reference for students.



### Sectioned 4-Cylinder Gasoline Engine Trainer

Order as: **772-01**

Typical practical tasks and topics include:

- Identification and position of all main engine mechanical components
- The operation of crankshaft and pistons
- The operation of inlet and exhaust valves
- The timing relationship between engine components



### Sectioned Diesel Engine (Common Rail) Trainer

Order as: **773-01**

Typical practical tasks and topics include:

- Identification and position of all main engine mechanical components
- The operation of a modern diesel engine
- Identification of fuel system mechanical components



	772-01	773-01	774-01	775-01
I. Engine Repair				
II. Automatic Transmission				
III. Manual Transmission				
IV. Suspension and Steering				
V. Brakes				
VI. Electrical & Electronic Systems				
VII. HVAC				
VIII. Engine Performance				

### Sectioned Automatic Gearbox Trainer

Order as: **775-01**

Typical practical tasks and topics include:

- Identification of all main auto-gearbox components
- Torque converter components
- Gear selector and park mechanisms
- Gearbox control through valves

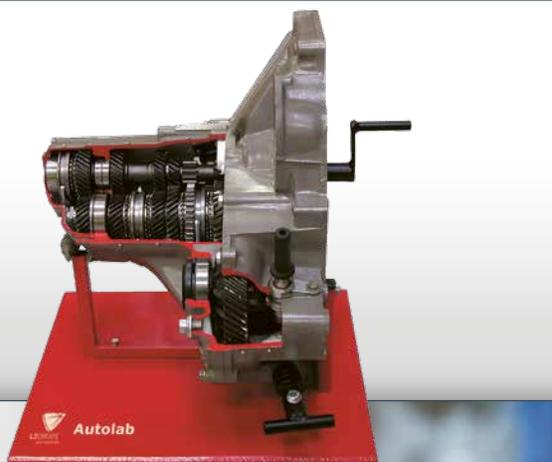


### Sectioned Manual Gearbox Trainer

Order as: **774-01**

Typical practical tasks and topics include:

- Identification of all main gearbox components
- Gear selection using selector lever and forks
- Operation of a synchromesh gearbox
- Calculation of individual gear ratio
- Calculation of final drive ratio



# ➔ Heavy Vehicle Skills

## Medium/Heavy Vehicle Rigs

In addition to our NATEF-aligned light vehicle hardware trainers we cater to medium and heavy vehicle training too. We can supply you with sectioned trainers, engine rigs, and a selection of specific heavy vehicle trainers, such as our Electronic Controlled Air Suspension Trainer.

All of our medium/heavy vehicle rigs are fitted with casters to enable easy transportation around the shop.



### 4-Cylinder HGV Diesel Engine (Common Rail)

Order as: [776-01](#)

Typical practical tasks and topics include:

- The position and mounting of all engine components
- Engine management system fundamentals
- Sensor and actuator components
- Pressurized fuel systems
- Switched faults with real fault-finding exercises



### Electronic Controlled Air Suspension Trainer

Order as: [777-01](#)

Typical practical tasks and topics include:

- Identification and operation of electronic controlled air suspension components
- Adjustment of operating components
- Use electronic tools to check, test, and set the system

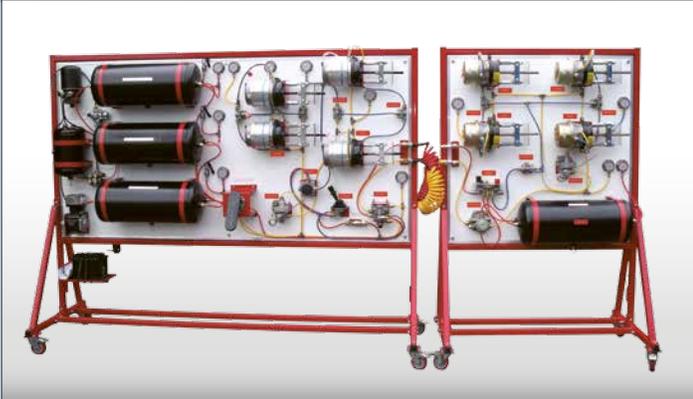


### Air Brake Tractor/Trailer System Trainer

Order as: **778-01**

Typical practical tasks and topics include:

- Identification of air brake system components
- Operation of air brake components
- Adjustment of operating components
- Use system pressures to identify component serviceability



### Sectioned HGV Gearbox Trainer

Order as: **780-01**

Typical practical tasks and topics include:

- Identification of main gearbox mechanical components
- Operation of gearbox and reduction components
- Identification of crawler range components
- Identification of synchro hubs



### Sectioned HGV Diesel Engine (4 Cylinder)

Order as: **779-01**

Typical practical tasks and topics include:

- Identification of all main engine mechanical components
- Operation of a modern diesel engine
- Identification and setting of fuel system mechanical components



### Sectioned HGV Rear Axle Trainer

Order as: **781-01**

Typical practical tasks and topics include:

- Identification of all rear axle mechanical components
- Operation of rear axle and double reduction components
- Identification and ratio of crown wheel and pinion
- Identification of brakes and brake components



# Medium/Heavy Vehicle Autotronics Panel Trainers

We have also created panel trainers for teaching students Engine Management and Electrical System skills for heavy vehicles. Just like our autotronics panel trainers on page 12 and 17, these panel trainers can be used in the classroom or the shop.

Faults can be inserted into the trainers to simulate real-world problems. **Your students can develop their diagnostic skills** by performing troubleshooting tasks using real diagnostic equipment. Test points are maintained at a safe voltage level.

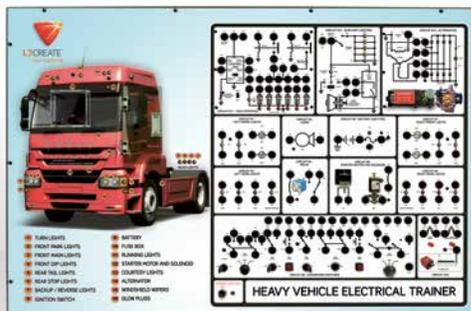


## Heavy Vehicle Electrical System Trainer

Order as: 757-01

Typical practical tasks and topics include:

- Prove measurements on a starter and solenoid
- Diagnose faults in a horn and relay circuit
- Test the operation of a reverse light switch
- Construct a schematic diagram of a turn signal

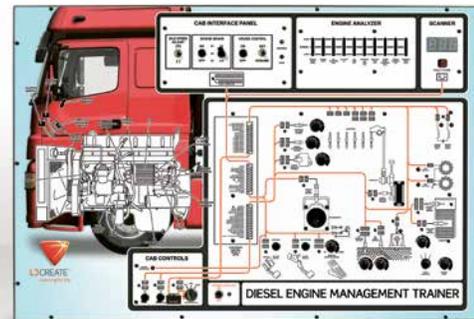


## Diesel Engine Management Systems Trainer

Order as: 758-01

Typical practical tasks and topics include:

- Diagnose faults involving digital sensors and switches
- Interpret voltage levels from a coolant level switch
- Diagnose faults with a fan clutch and fan switch
- Investigate an engine position sensor

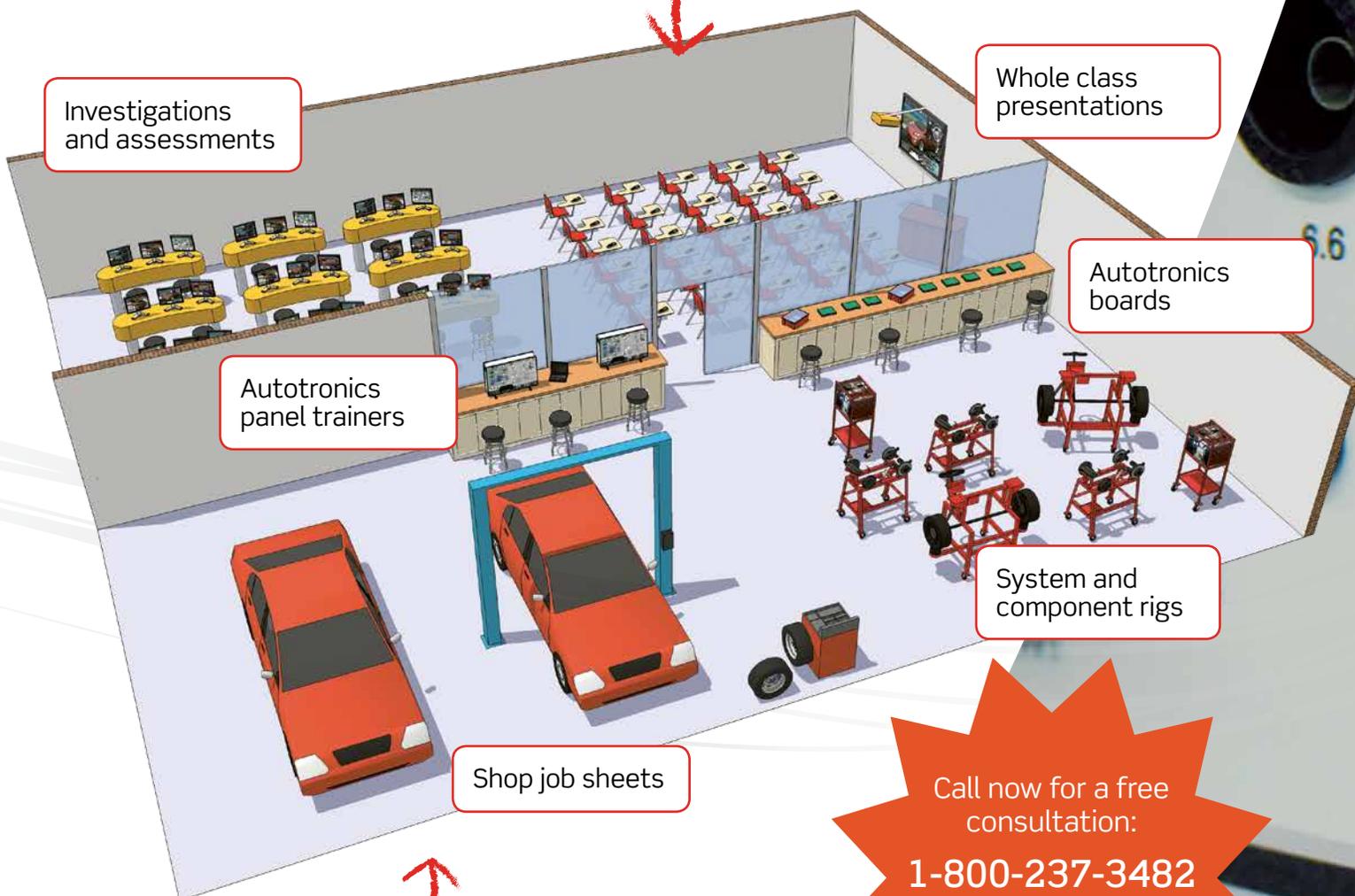


## Create your own AutoLab

**AutoLab is uniquely flexible.**

We can create a bespoke AutoLab for you and your school or college that responds to your space, course and budget requirements. Take a look at the diagram below for just one example of an AutoLab configuration.

### Knowledge Lessons Zone



### Skills Lessons Zone

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