



## Introduction

The maintenance and repair of modern vehicles has become increasingly complex, with electronic technology and intelligent systems in passenger cars growing exponentially over recent years. It is therefore essential to have not only the correct tools, diagnostic equipment and skills, but technical knowledge and up-to-date information are also vital.

Training with Bosch provides today's technicians with the required knowledge and expertise, enabling them to work effectively and more efficiently on the latest vehicles, covering the most up-to-date systems including ADAS and Electric Vehicles.

Our technical and customer-focused portfolio of training is structured to benefit all levels of interest, from short online essential skills-learning, right up to advanced master technician proficiency, with individually certified courses and complete industry-recognised programmes.

#### Benefits at a glance

- Perfectly balanced between classroom and hands-on workshop learning
- Majority of courses held over 1 or 2 days, at our dedicated Training Centres
- Online and blended-learning options for new technology courses available
- More effective and efficient maintenance and fault diagnosis
- Improved profit for your business
- Greater customer satisfaction

More information can be found on these courses over the following pages and also online at www.bosch-training-solutions.com

Train with experts and future-proof your business with Bosch.

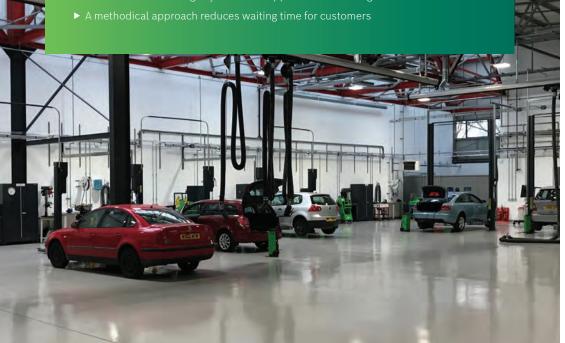
## Learning at the highest level Bosch Training Solutions

Bosch offers training solutions for every target group, from beginners to highly-experienced professionals, from short half-day sessions to longer courses.

Our technical courses provide participants with a comprehensive understanding of a multitude of vehicle systems available on the market. Besides Bosch's own systems, the training also covers other manufacturers' systems, providing participants with an excellent variety of content and knowledge. Course content is geared very much towards practical application and has been specially designed to address the needs of automotive workshop personnel.

### Your benefits

- Decades of experience and comprehensive knowledge of almost every automotive system
- ▶ Effective and efficient solutions to numerous situations and applications
- ► Knowledge gained facilitates faster repairs, maintenance and servicing work
- Highly-qualified instructors deliver to small groups, ensuring focussed and structured learning
- ▶ Participation in training increases employee motivation and satisfaction
- Additional qualifications within your team earn customers' trust
- ► Increased sales through systems and application knowledge



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## New Online Training Summary



## We have recently developed a wide portfolio of Online 'Virtual Classroom' and 'Blended Learning' options.



These are delivered via an online video link, by our very own Bosch Trainers, creating a fully-interactive learning experience and bringing the course direct to you, whilst you attend from the convenience and comfort of your workshop, office desk, or even from home. What's more, you save time and money, with no expense for travel or overnight accommodation.

You will find more information on all of the below courses in their corresponding section of the catalogue.

#### E-Learning (Always available, Online and FREE of charge)

ESI-KTS Introduction Training (Replaces KTS User course)
 Page 37
 Virtual Classroom (VC) Online Training
 Known Fixes, Tips & Tricks - VSTD51-VC
 Page 38
 Electric/Hybrid Vehicle System Awareness - VSH22-VC
 Page 43
 Vehicle Safety Systems - Airbag - VSB43-VC
 Page 57
 Vehicle Safety Systems - Braking - VSC42-VC
 Page 58
 Vehicle Safety Systems - TPMS - VSC44-VC
 Page 59
 Vehicle Fuel Systems - Diesel - VSD46-VC

#### **Blended Learning (B) Training**

-	Hybrid and Electric Vehicle Systems (Level 2 & 3 Combined) VSH267-B	Page 44
-	Hybrid and Electric Vehicle Systems (Level 4) VSH28-B	Page 45
-	Advanced Driver Assistance Systems (ADAS) - VSB41-B	Page 53

## Bosch Automotive Training Solutions (BATS) A new improved online platform



The Bosch training portfolio can be accessed online from the new Bosch Automotive Training Solutions platform, allowing you to book and manage your training courses. After the registration process, every customer has access to their own account and training records. Workshop managers have the ability to view the training history of employees and can select, and book, specific training courses for them. This enables training and further education to be planned and organised in a highly systematic way.

- Customer-friendly interface
- Additional workshop management roles
- · Online course booking
- Printing of Training Certificates
- Continuous updates based on customer requirements
- Single sign-on with Global Bosch ID
- New design in line with other Bosch customer websites

#### How to access

- 1 Register at www.Bosch-Training-Solutions.com and create your Bosch ID
- 2 Once you receive your confirmation email, log in using your new Bosch ID and password
- 3 Follow the on-screen prompts to create your User Profile
- 4 Browse the Training Solutions website for course dates, online bookings, planning and management of your training requirements



### **Bosch Training Centres**

As a world-renowned Superbrand and with over a century of experience in innovation, Bosch has set the standards globally as a provider of automotive systems, parts and technical solutions.

Much of our strength comes from our close partnerships with vehicle manufacturers, for whom we design, develop and produce state-of-the-art systems and components the world over.

Consequently, Bosch has cemented a strong history in automotive aftermarket products and support with a diverse portfolio of parts, diagnostic solutions and workshop services.

Learning and development are sure keys to success and this philosophy is underpinned by a broad range of training courses, in all areas of automotive technology, vehicle systems and diagnostic expertise.

Available at our dedicated Training Centres in Denham, Doncaster and Glasgow, these courses are delivered by highly-qualified, experienced trainers, many of whom have a professional workshop background, and are keen to share their wealth of knowledge and experience with fellow independent workshops.

Using the latest diagnostic equipment and proven techniques, during hands-on workshop training sessions, we work with small groups of participants in order to help them to understand the routines and content they have learned. This enables them to become more effective and efficient as technicians in their workshops, whilst also gaining industry-recognised qualifications and skills.



## Introduction to Bosch Training Programmes



Bosch are pleased to offer two industry-recognised programmes of Vehicle Systems training, designed to provide structured learning, with the aim to increase both knowledge and skill levels as the candidate progresses sequentially through the courses.

## Bosch Diagnostic Technician Programme

Bosch Master Technician Programme

Beginning with the essential diagnostic skills covered in VSE1 (Essential Test Procedures), then following the pathway through the programme ensures that the prerequisite learning is achieved at each stage, prior to attending the following course.

Content of both Diagnostic and Master Technician Programmes is delivered in line with the requirements of our partners at the Institute of the Motor Industry (IMI) for their awards of Diagnostic and Master Technician. Therefore, upon successful completion of the Bosch programmes, the candidate can then take the relevant assessments in order to gain certification from Bosch and also achieve their IMI award.

These assessments along with content detail, are further explained later in this catalogue.

Please refer to the following pages for the Bosch Diagnostic Technician and Master Technician Programme pathways.



Accredited training

## Bosch Diagnostic Technician Programme

The Bosch Diagnostic Technician Programme has been the standard for all professional workshops.

Accredited by the IMI, each training module gives the technician an industry-recognised qualification while building knowledge and working towards the end goal of a final IMI Assessment.

The courses can be spread out over months or years, with technicians attending within a time frame that suits the business and their individual training requirements.



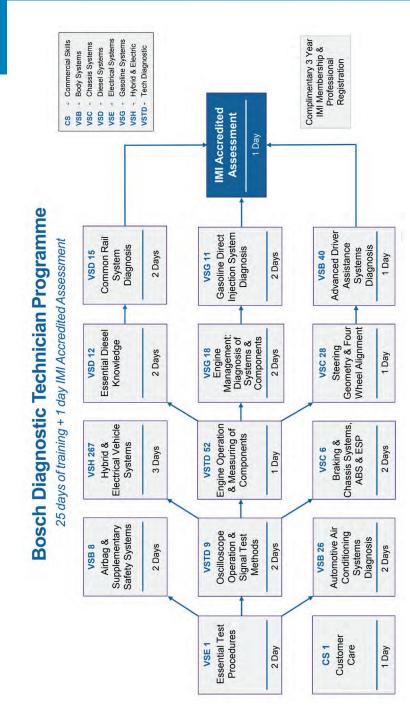


## The Pathway

- ▶ Essential Test Procedures VSF1
- ► Oscilloscope Operation & Signal Test Methods VSTD9
- ► Hybrid & Electric Vehicle Systems VSH267
- ► Engine Operation & Measuring of Components VSTD52
- ► Engine Management Diagnosis of Universal Components VSG18
- ► Gasoline Direct Injection System Diagnosis VSG11
- ➤ Airbag & Supplementary Safety Systems VSB8
- ► Automotive Air Conditioning Systems Diagnosis VSB26
- ► Braking & Chassis Systems, ABS & ESP VSC6
- ➤ Steering Geometry & Four Wheel Alignment VSC28
- ► Advanced Driver Assistance Systems (ADAS) VSB40
- ► Essential Diesel Knowledge VSD12
- ► Common Rail System Diagnosis VSD15
- ► Customer Care CS1

#### **BDT IMI Accredited Assessment**

The sequence above represents our suggested pathway through the Bosch Diagnostic Training Programme. However, an individual may have a preference for a different route, or wish to prioritise a particular course.



# Electrical Systems and Electronics



### VSE1 Essential Test Procedures

Part Number: 1987727520

#### **DURATION:**

2 Days

#### TRAINING GOAL:

On successful completion of VSE1, delegates will be able to:

- Refer to a typical system wiring diagram to identify the electrical components
- Identify the current paths connecting them to the control unit(s) of the system
- Use electrical test equipment correctly on vehicle system circuits
- Carry out test procedures using voltage resistance and current measurement
- Carry out test procedures using voltage drop method to indicate circuit faults
- Use additional equipment to test battery condition and circuit conditions

#### **CONTENT:**

- Electrical values and their measurement for test purposes
- Identification of typical circuit symbols and use of wiring diagrams
- Test methods for circuit continuity, insulation and resistance
- The properties and testing of series and parallel circuits
- The application and use of voltage drop measurement tests
- Battery starting and charging systems. Operation, testing and diagnostics

#### **PREREQUISITES:**

We recommend that delegates are familiar with the operation of a typical digital multimeter and can use it correctly on automotive applications.

## **Diagnostics**

## VSTD9 Oscilloscope Operation & Signal Test Methods



Part Number: 1987727869

#### **DURATION:**

2 Days

#### TRAINING GOAL:

On successful completion of VSTD9, delegates will be able to:

- Connect a typical automotive oscilloscope to a vehicle system component or wiring to display a signal waveform
- Adjust the common oscilloscope controls and settings to manipulate the signal displayed so that it can be analysed
- Monitor, analyse and compare signal waveforms to determine indications of component or wiring faults

#### CONTENT:

- Preliminary review of the oscilloscope
- Waveform display with control adjustments and settings
- Connections and test methods
- Waveform display analysis on typical system components
- Waveform comparison and interpretation

#### **PREREQUISITES:**

We recommend delegates are fully conversant with the electrical values of voltage, current and resistance and the use of a digital multimeter.

The skills and knowledge for this are covered in the Bosch course VSE1.

## VSH267 Hybrid & Electric Vehicle Systems - Fast-Track

Part Number: 1987726041

Combined Level 2 and 3 Award in Electric/Hybrid Vehicles Repair and Replacement (IMI - 603/1468/0)



3 Days

#### TRAINING GOAL:

On successful completion of VSH267, delegates will:

- Have gained knowledge and skills of high voltage component replacement
- Be awarded IMI Level 3 Award in Electric/Hybrid Vehicle System Repair and Replacement (IMI 603/1468/0)

#### **OVERVIEW:**

Technicians wishing to carry out service and maintenance work on Hybrid and Electric vehicles, require the knowledge and skills to be able to make the high voltage system safe. This course contains the knowledge required to diagnose faults and work safely on a vehicle's deactivated high voltage system.

This qualification is for technicians who wish to maintain and repair high voltage technologies, including the hybrid or electric drive system itself.

It is NOT for anyone desiring to work with 'Live High Voltage'.

This skill is covered in Level 4 HEV (VSH28-B).

#### CONTENT:

- How to work safely on hybrid and related vehicle systems
- High voltage system diagnosis using diagnostic test equipment
- E machine/motor generator, HV Insulation testing
- Removal and replacement of typical system components

#### **PREREQUISITES:**

Individuals interested in taking this course will need to possess appropriate vehicle maintenance and repair knowledge and skills at Level 3. Candidates must complete pre-learning before attending this course, using material supplied on course booking. This will be assessed during the course.





## VSTD52 Engine Operation and Measuring of Components

Part Number: 1987726257





#### **DURATION:**

1 Day

#### TRAINING GOAL:

On successful completion of VSTD52, delegates will be able to:

- Understand the fundamentals of engine design and process
- Understand and be able to use the correct tooling and measurement values when carrying out diagnostics on an engine or other component

#### **OVERVIEW:**

This course is designed for workshop technicians who would like to learn a little more about engine fundamentals and measurements. Due to lack of use, we have found that this fundamental knowledge can be lacking, however, it is still very much required and critical information for the successful completion of our diagnostic technician assessment.

#### **CONTENT:**

- Four-stroke cycle and valve timing
- Engine construction and design
- Measurement units, terms and tooling
- Measuring practical

#### PREREQUISITES:

There are no prerequisites for attending this course.

## Gasoline

## VSG18 Engine Management Diagnosis of Universal Components



NEW

Part Number: 1987AZ0314

#### **DURATION:**

2 Davs

#### TRAINING GOAL:

On successful completion of VSG18, delegates will be able to:

- Complete tests on fuel supply sub-systems
- Interpret diagnostic data and utilise additional settings and functions
- Understand the working principles of all key engine management components
- Perform oscilloscope testing to identify faults in components or wiring

#### **OVERVIEW:**

This course provides technicians with the skills and knowledge to test and diagnose engine management systems with confidence, including a sound working knowledge of all of the components within a typical engine management system and how to test them. This is done via a mixture of classroom theoretical sessions and workshop practical tests to build the skills in a step-by-step manner. This course also provides the foundation knowledge for progression onto further Bosch engine management training courses.

#### **CONTENT:**

- Engine management systems overview
- Fuel supply sub-systems
- Diagnostic testing and circuit diagrams
- System inputs and sensor testing
- System outputs and actuator testing
- Diagnostics fault memory and additional functions
- Overview of emissions systems

#### **PREREQUISITES:**

Delegates should be competent in the use of a digital multimeter and an oscilloscope prior to attendance on VSG18.

These skills are covered by the Bosch courses VSE1 and VSTD9.

## Gasoline

## VSG11 Gasoline Direct Injection System Diagnosis



Part Number: 1987726836

#### **DURATION:**

2 Days

#### TRAINING GOAL:

On successful completion of VSG11, delegates will be able to:

- Identify and state the function of a typical Bosch GDI system including the operating modes, the sensors and actuators
- Utilise serial diagnostic data and the oscilloscope for the testing of system component input and output signals
- Diagnose typical system running faults and perform system tests that determine the required system or component repairs

#### **CONTENT:**

- Overview of the system layout and design concept
- Design and function of the individual working components
- Air, fuel supply and exhaust system component operation
- Fuelling modes of operation and other unique system functions
- System testing and diagnosis

#### PREREQUISITES:

This training course has a high technical content.

We therefore strongly recommend that delegates are already familiar with manifold type gasoline injection systems.

Bosch courses VSTD9 and VSG18 provide the essential prerequisite knowledge for this course.

## VSB8 Airbag & Supplementary Safety Systems



Body and Comfort VSB26 Automotive Air



VSB26 Automotive Air Conditioning Systems Diagnosis

Part Number: 1987727795

## Part Number: 1987727796

#### **DURATION:**

2 Days

#### **TRAINING GOAL:**

On successful completion of VSB8, delegates will be able to:

- Carry out safe diagnostic test routines on Airbag and SRS control systems, components and wiring, as indicated by fault codes retrieved from the system
- Carry out safe system and component test procedures that identify where appropriate repair or replacement should be carried out

#### **CONTENT:**

- Airbag and SRS systems review of principles and operation
- SRS Systems and safe working practices
- Airbag and SRS system generic components and function
- Airbag and SRS vehicle system overviews
- Airbag and SRS system testing and diagnosis
- Developments in the design of passive safety systems

#### **PREREQUISITES:**

It is a safety requirement that delegates have gained the essential knowledge and skills to use a digital multi-meter, the Bosch VSE1 course will provide the necessary training required.

#### **DURATION:**

2 Days

#### TRAINING GOAL:

On successful completion of VSB26, delegates will be able to:

- Identify all the main components of an automotive air conditioning system and state their function
- Complete a typical automotive air conditioning service using a Bosch Air
   Conditioning recovery unit and demonstrate safe working practice

#### **CONTENT:**

- Mandatory legislation, health and safety procedures
- Introduction to air conditioning
- Refrigeration systems TXV and FOT
- Air conditioning system components
- Service equipment and procedures
- Safe handling of refrigerant and environmental concerns
- Hybrid vehicle air-con systems are covered

#### **PREREQUISITES:**

While the course content covers all the required subjects in detail, it is an advantage if delegates have some prior knowledge of the operation of automotive air conditioning systems and the typical service equipment used.

## Chassis and Braking

## VSC6 Braking & Chassis Systems, ABS & ESP



VSC28 Steering Geometry & Four Wheel Alignment

Chassis and Braking

Part Number: 1987727570

Part Number: 1987727572

#### **DURATION:**

2 Days

#### TRAINING GOAL:

On successful completion of VSC6, delegates will be able to:

- Complete typical ABS or ESP tests to prove the integrity of the system and the related brake functions in ABS or ESP control units
- Carry out fault diagnostic tests on typical ABS or ESP systems that locate system and component faults that require repair or replacement

#### **CONTENT:**

- Hydraulic braking systems
- Developments in Anti-lock Braking Systems (ABS)
- Wheel speed sensor technology and testing
- Electronic brake modulation technology
- Traction Control systems and process implementation (ASR/TC)
- Electronic Stability Program systems (ESP)

#### **PREREQUISITES:**

All delegates should be familiar with the use of a vehicle system diagnostic tester and an oscilloscope prior to attendance. The Bosch course VSTD9 provides training on the oscilloscope skills required.

#### **DURATION:**

1 Day

#### TRAINING GOAL:

On successful completion of VSC28, delegates will be able to:

- State the mechanical and geometric measured values in relation to suspension and steering systems and the effects if incorrect
- Measure and record the alignment related values on a typical vehicle for all wheels to determine the alignment adjustments required
- Carry out adjustments to return the vehicle to the correct specification

#### CONTENT:

- Principles of suspension and steering
- Understanding geometric values and ride height
- Preparatory checks and inspection
- Tyre characteristics and the influence on the vehicle
- Carrying out measurements correctly
- Practice using a typical Bosch wheel aligner
- Advanced suspension systems

#### **PREREQUISITES:**

We advise delegates to familiarise themselves in advance with the wheel alignment equipment in their workplace and the primary vehicle measurements.

## VSB40 Advanced Driver Assistance Systems (ADAS)



Part Number: 1987726022

#### **DURATION:**

1 Day

#### TRAINING GOAL:

On successful completion of VSB40, delegates will be able to:

- Better understand the interconnectivity of modern safety systems and driver aids
- Have an overview of the various ADAS sensors, and their application
- See how to use the KTS, to carry out a comprehensive vehicle search of ADAS systems
- Have an understanding of the test equipment required for ADAS service tasks
- See the set-up and calibration process of a modern ADAS sensor

#### **CONTENT:**

- Introduction to ADAS
- ADAS & KTS
- ADAS sensors and their application
- The progression to autonomous driving
- Sensor calibration
- Practical exercises including diagnostic routines and the calibration of an ADAS sensor

#### **PREREQUISITES:**

There are no prerequisites to attend VSB40 however, trainees would benefit from attending ESI-KTS Introduction and VSC28.

### Diesel

### VSD12 Essential Diesel Knowledge



Part Number: 1987726248

#### **DURATION:**

2 Days

#### TRAINING GOAL:

On successful completion of VSD12, delegates will be able to:

- Identify components of typical electronic diesel control systems and state their function
- Carry out fault diagnosis and test procedures on typical electronic diesel control systems
- Perform tests to ensure the serviceability of components on these diesel systems

#### **CONTENT:**

- Diesel engine design and combustion
- Fuel system circuits
- Diesel timing and quantity control
- Induction and exhaust components
- Typical diesel system sensors and actuators
- Emission control devices

#### PREREQUISITES:

We recommend that delegates are familiar with the use of a typical diagnostic tester and an oscilloscope. Previous experience with gasoline injection systems is also a distinct advantage. The Bosch courses VSTD9 and VSG18 provide the knowledge and skills required.

## Diesel

## VSD15 Common Rail System Diagnosis

Part Number: 1987726221

## **Business Skills**

### CS1 Customer Care

Part Number: 1987727592



#### **DURATION:**

2 Days

#### TRAINING GOAL:

On successful completion of VSD15, delegates will be able to:

- Complete diagnostic tests on a Common Rail, high-pressure fuel system using safe working practices
- Identify both fuel system and electrical component faults
- Carry out diagnostic test routines on common rail systems, which will enable correct identification of faulty injectors

#### **CONTENT:**

- Low-pressure fuel systems
- High-pressure fuel systems and control
- Solenoid & Piezo injector function
- Common Rail injector analysis
- In-depth test procedures and fault diagnosis

#### **PREREQUISITES:**

We recommend that delegates are competent with gasoline injection systems and already familiar with the essentials of diesel car and light van technology. The Bosch courses VSTD9, VSG18 and VSD12 provide the knowledge and skills required.

#### **DURATION:**

1 Day

#### TRAINING GOAL:

On successful completion of CS1, delegates will be able to:

- Identify the key skills required in providing excellent customer service
- Compare the application of good and bad customer service using case studies and group activities
- Utilise the principles of best practice in customer care and apply defined improvements to benefit the business and working environment

#### **CONTENT:**

- Why customer service is important
- Understanding your customer needs
- Common problems and complaints
- How to deliver outstanding customer service
- Finding out what your customers think
- Case studies and practical exercises

#### **TARGET GROUP:**

Any workshop staff including front of house wishing to gain an overview of customer care.

## Bosch Master Technician Programme

The Bosch Master Technician Programme epitomises the uppermost echelon in Bosch automotive technical training.

Content of these courses is at a premium level and we thoroughly recommend attendance of the Bosch Diagnostic Technician Programme, prior to undertaking these modules.





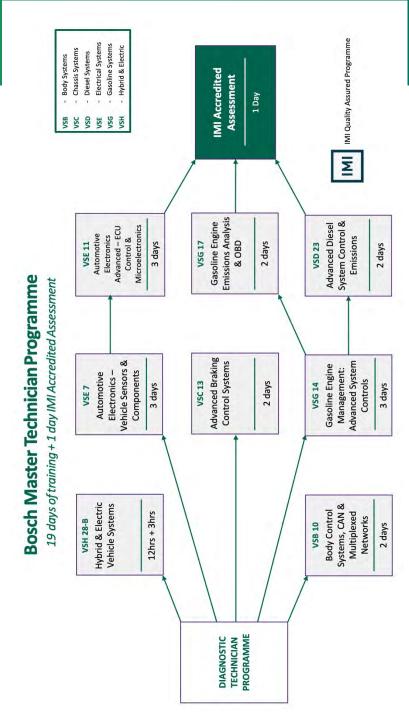
### The Pathway

- ► Hybrid & Electric Vehicle Systems VSH28-B
- ► Body Control Systems, CAN & Multiplexed Networks VSB10
- ► Advanced Braking Control System VSC13
- ► Gasoline Engine Management Advanced System Controls VSG14
- ► Gasoline Engine Emissions Analysis & OBD VSG17
- ► Advanced Diesel System Control & Emissions VSD23
- ► Automotive Electronics Vehicle Sensors & Components VSE7
- ► Automotive Electronics Advanced - ECU Control & Microelectronics VSE11

#### **BMT IMI Accredited Assessment**

The sequence shown above represents the suggested pathway through the Bosch Master Technician Training Programme and is our recommendation. However, an individual may have a preference for a different route or wish to prioritise a particular course.

VSE7 and VSE11 in particular require a considerably high level of technical knowledge and prerequisite electronics systems understanding.



VSH28-B Online/Blended Hybrid & Electric Vehicle Systems IMI Level 4





Part Number: 1987726185

IMI Level 4 Award in the Diagnosis, Testing and Repair of Electric/Hybrid Vehicles and Components (IMI 610/0975/1)

#### **DURATION:**

6 x Two-hour Online Modules, plus a half-day face-to-face Practical Assessment

#### TRAINING GOAL:

This qualification is designed for motor vehicle professionals who maintain and repair Hybrid Electric Vehicles (HEV) technologies, including HEV drive and batteries. The course will give technicians the knowledge and skills to be able to work on or near LIVE high voltage HEV. This course contains information for carrying out diagnosis, repairs, and replacement of high voltage components whilst working safely.

#### **CONTENT:**

- Module 1: Online HV safety overview
- Module 2: Online E machine/motor-generator, HV Insulation testing
- Module 3: Online Batteries
- Module 4: Online HV control System relays, DC-DC converter
- Module 5: Online Propulsion
- Module 6: Online Assessment preparation
- Module 7: F2F Practical assessment
- Written assignment (min. 1000 words) to be completed within 4 weeks of the practical assessment

#### PREREQUISITES:

- The IMI require applicants to hold a Level 3 HEV Systems qualification and 6 months experience with HEV Systems
- Candidates must also complete pre-learning before attending this course
- Level 2 & 3 HEV course notes revision



## **Body and Comfort**

VSB10 Body Control Systems, CAN & Multiplexed Networks



Part Number: 1987727790

#### **DURATION:**

2 Days

#### TRAINING GOAL:

On successful completion of VSB10, delegates will be able to:

- Identify the various vehicle network types, typical transmission signal profiles and transport mediums
- Carry out diagnostic test routines on vehicle network bus systems and analysis of related faults
- Test body electrical systems and components to identify items requiring replacement or repair where appropriate

#### CONTENT:

- Serial data transmission, bits and bytes
- Vehicle network requirements and the various topologies
- LIN, CAN, Byteflight, MOST and FlexRay
- Cabled and optical transfer mediums
- Vehicle security, central locking, electric windows, wiper systems
- Lighting systems, instrumentation, parking aid systems

#### **PREREQUISITES:**

It is recommended that delegates have successfully completed Bosch courses VSE1 and VSTD9. Delegates are expected to be experienced in typical oscilloscope and diagnostic tester operation and should have attended the appropriate equipment operator's courses.

It is strongly recommended that delegates have successfully completed the Bosch Diagnostic Technician Programme prior to attending this course.

**Bosch Master Technician Programme** 

Book today at www.bosch-training-solutions.com

## Chassis and Braking

## VSC13 Advanced Braking Control Systems

Part Number: 1987726393





#### **DURATION:**

2 Days

#### TRAINING GOAL:

On successful completion of VSC13, delegates will be able to:

- Carry out diagnostic test routines on active braking control systems and their individual components
- Identify faults that require replacement or repair where appropriate and complete comprehensive system tests to ensure full serviceability and safe operation

#### **CONTENT:**

- ABS working theory overview and associated controls
- Vehicle stability methods on ABS systems
- Select Low operation and Cumulative Yaw Deceleration
- Engine Drag Torque Control and Electronic Brake Distribution
- Traction Control methods, ECU control and implementation
- Active wheel speed sensor technology
- Bosch Electronic Stability Program Systems

#### **PREREQUISITES:**

It is recommended that delegates have successfully completed Bosch courses VSE1, VSTD9, and VSC6. Delegates are expected to be experienced in typical oscilloscope and diagnostic tester operation.

It is strongly recommended that delegates have successfully completed the Bosch Diagnostic Technician Programme prior to attending this course.

### Gasoline



## VSG14 Gasoline Engine Management Advanced System Controls

Part Number: 1987726102

#### **DURATION:**

3 Days

#### TRAINING GOAL:

On successful completion of VSG14, delegates will be able to:

- Comprehensively identify and state the detailed operation of the sensors, components and actuators of advanced engine management systems
- Carry out advanced diagnostic test routines on systems and individual components, utilising all available data for the evaluation of vehicle faults

#### **CONTENT:**

- Demand controlled fuel supply
- Injector testing and diagnosis
- Intake charge control and variable camshaft timing
- Air mass meter function, advanced testing and diagnosis
- Misfire detection and advanced phase sensing methods
- Lambda adaptation and diagnostic terminologies
- Catalytic converter diagnosis
- Broadband lambda sensor function and testing

#### PREREQUISITES:

It is recommended that delegates have successfully completed Bosch course VSG18 as a minimum, prior to attending this advanced course. Delegates must be fully proficient in the operation of an oscilloscope, gas analyser and diagnostic test equipment.

It is strongly recommended that delegates have successfully completed the Bosch Diagnostic Technician Programme prior to attending this course.

## Gasoline

## VSG17 Gasoline Engine Emissions Analysis & OBD



Part Number: 1987AZ0318

#### **DURATION:**

2 Days

#### TRAINING GOAL:

On successful completion of VSG17 delegates will be able to:

- Distinguish the fault indications made by each of the individual exhaust gasses and use gas readings to aid in pinpointing engine running faults
- Carry out diagnostic test routines to enable the correlation and assessment of exhaust gas values with diagnostic port information, and utilise all available OBD diagnostic modes for the evaluation of vehicle faults

#### **CONTENT:**

- Primary exhaust gas constituents and the catalytic converter
- Exhaust gas emissions values and gas relationships
- Emissions faults diagnosis via interpretation of gas values
- Emissions control legislation On Board Diagnosis (OBD)
- The OBD operational modes diagnostic tester understanding

#### **PREREQUISITES:**

It is recommended that delegates have successfully completed Bosch diesel engine management courses VSD12 and VSD15. Delegates must be fully proficient in the operation of typical oscilloscopes, diagnostic test equipment, and should have attended the appropriate equipment operator's courses.

It is strongly recommended that delegates have successfully completed the Bosch Diagnostic Technician Programme prior to attending this course.

### Diesel

## VSD23 Advanced Diesel Systems Control & Emissions



Part Number: 1987726250

#### **DURATION:**

2 Days

#### TRAINING GOAL:

On successful completion of VSD23, delegates will be able to:

- Comprehensively identify and state the detailed operation of the sensors, components and actuators of advanced engine management systems
- Carry out advanced diagnostic test routines on systems and individual components, utilising all available data for the evaluation of vehicle faults
- They will be able to identify any components requiring replacement or repair and carry out comprehensive system tests to ensure functional serviceability

#### CONTENT:

- Diesel Exhaust Gas after-treatment
- Diesel Particulate Filters
- Fuel Contamination & CR
- Denoxtronic
- Water-cooled EGR
- CR MV Injector Testing
- CP4 Systems
- HFM 6
- Ceramic Glow plugs
- New CR Technology

#### **PREREQUISITES:**

It is recommended that delegates have successfully completed Bosch diesel engine management courses VSD12 and VSD15. Delegates must be fully proficient in the operation of typical oscilloscopes, diagnostic test equipment, and should have attended the appropriate equipment operator's courses.

It is strongly recommended that delegates have successfully completed the Bosch Diagnostic Technician Programme prior to attending this course.

# Electrical Systems and Electronics



## VSE7 Automotive Electronics - Vehicle Sensors & Components

Part Number: 1987727521

#### **DURATION:**

3 Days

#### TRAINING GOAL:

On successful completion of VSE7, delegates will be able to:

- Carry out advanced analysis of vehicle electronic faults at an accomplished level and utilise specific component test procedures to provide extra data in the evaluation of vehicle system and component faults
- Use the knowledge gained on the functioning of electronic devices to confirm components requiring replacement or repair where appropriate

#### **CONTENT:**

- Electronic properties, atomic behaviour and magnetic principles
- Series, parallel and composite resistive circuits
- Voltage dividers, Wheatstone bridge, MAP and air mass sensors
- Inductors, capacitors and sensor applications
- Semiconductor technology, diodes, LED's and transistors
- Speed, position, movement, gas and further sensor technologies

#### **PREREQUISITES:**

It is strongly recommended that delegates for this electronics course have successfully completed the Bosch Diagnostic Technician programme. Delegates are expected to be familiar with common electrical principles and an understanding of basic mathematical principles will also be of advantage.

It is strongly recommended that delegates have successfully completed the Bosch Diagnostic Technician Programme prior to attending this course.

## Electrical Systems and Electronics



## VSE11 Automotive Electronics Advanced ECU Control & Microelectronics

Part Number: 1987727522

#### **DURATION:**

3 Days

#### TRAINING GOAL:

On successful completion of VSE11, delegates will be able to:

- Carry out advanced electronic analysis of vehicle circuitry and control electronics for the high-level diagnosis of vehicle electronic faults
- Use the knowledge and skills gained to aid in identification of hardware or software related faults and correct ECU control function

#### **CONTENT:**

- Transistors & application circuitry
- Multivibrator circuits and combined technologies
- Logic gates and applications
- Clocks, shift registers, frequency dividers, and counters
- Microcontrollers, CPU's, memories and peripherals
- ECU architecture and input/output circuitry
- ECU language, CA messaging and software

#### PREREQUISITES:

It is strongly recommended that delegates for this electronics course have successfully completed the Bosch course VSE7 and its prerequisites. Delegates are expected to be familiar with oscilloscope waveform manipulation and advanced electrical fault-finding. A good understanding of mathematical principles will also be an advantage.

It is strongly recommended that delegates have successfully completed the Bosch Diagnostic Technician Programme prior to attending this course.



## Diagnostics

## ESI-KTS Online Introduction Training





#### **DURATION:**

1-hour online module

#### TRAINING GOAL:

This e-learning equipment course is specifically for technicians new to the use of Bosch KTS 5xx and KTS 3xx serial diagnostic testers with ESI[tronic] 2.0. With an emphasis on operational skills, it covers all aspects of the KTS hardware and software operation. ESI[tronic] 2.0 is designed to be user friendly, when it comes to diagnosis, the desires of garage services are much the same.

The software in the diagnosis unit is capable of more than just simple control unit diagnosis. Intelligent fault finding, support for rapid repair and simple maintenance tasks are included. Operation is simple despite the high technical performance. An in-depth understanding of these various user features and options will enable the technician to make maximum use of the KTS in the workplace for efficient vehicle diagnosis and repair.

#### **CONTENT:**

- ESI[tronic] 2.0 Overview & vehicle identification
- Effective use of Control Unit Diagnosis
- Utilising ESI[tronic] 2.0 troubleshooting
- KTS test meters & oscilloscope
- ESI/KTS tips and tricks

#### **TARGET GROUP:**

- New users of Bosch KTS 5xx, KTS 3xx, or existing users looking to refresh their knowledge and skills

Free of Charge for all registered users on the Bosch Automotive Training Solutions website

## Diagnostics

## VSTD51-VC Online Known Fixes, Tips & Tricks

Part Number: 1987726036





## **Diagnostics**

## VSTD33.1 Understanding Diagnostic Fault Codes & Live Data

Part Number: 1987727848



#### **DURATION:**

1 x Two-hour online module

#### TRAINING GOAL:

On successful completion of VSTD51-VC, delegates will be able to:

- See 10 common known fixes, tips & tricks from 10 different manufacturers
- Gained valuable knowledge seeing one known fault/symptom with its associated diagnostic process

This course is designed for workshop technicians who find themselves pushed for time. Why not use our knowledge and experience to easily identify, diagnose and repair common faults across a broad range of manufacturers? This is intended as an entry-level course for technicians with little or no diagnostic experience.

#### **CONTENT:**

- 10 known fixes from 10 different manufacturers
- Vehicles ranging alphabetically from Audi to Kia
- Faults relating to engine, chassis, electrical & body systems
- Tips, tricks & additional information
- Diagnostic process

#### **PREREQUISITES:**

There are no prerequisites for attending this course.

#### **DURATION:**

1 Day

#### TRAINING GOAL:

On successful completion of VSTD33.1, delegates will be able to:

- Carry out Control Unit Diagnosis test routines for error memory, actual values, actuator test, adjustments and settings and special feature test modes
- Access and use a selection of specific fault codes, actual values (live data) within ESI[tronic] 2.0 software
- Complete a set of system tests using the linked functions of SD, SIS/CAS and the built-in multimeter and oscilloscope test tools in a logical diagnostic procedure

#### **CONTENT:**

- Error memory (Fault codes)
- Actual Values (Live data)
- Adjustments and Settings
- Special functions
- Diagnostics with SD, SIS(CAS) and Test tools

#### PREREQUISITES:

Completion of ESI-KTS Intro or experience of KTS use is recommended.

## Diagnostics

## VSTD38 Introduction to PassThru (PSA, Opel & Vauxhall)





Part Number: 1987727958

#### **DURATION:**

1 Day

#### TRAINING GOAL:

On successful completion of VSTD38, delegates will be able to:

- Complete a subscription process using their own laptop
- Load the PSA & Opel/Vauxhall software and configure the KTS interface for PassThru capability
- Connect to a vehicle using the KTS as a PassThru device for use with the Opel / Vauxhall portal and carry out a comprehensive diagnostic routine
- Leave the course with a functional solution to PSA & Opel/Vauxhall PassThru (Subject to successful completion of the prerequisites listed below)

#### **CONTENT:**

- Introduction to PassThru
- Explanation of the different subscription types and processes
- Computer set-up
- Configure KTS as a PassThru interface (Workshop World)
- Navigation of the PSA & Opel / Vauxhall Portal
- Carry out practical exercises

#### **PREREQUISITES:**

- Trainees to pre-register with PSA @https://public.servicebox-parts.com
- Trainees to bring a Windows 10 Laptop and KTS 560/590 or KTS350 loaded with Windows 10
- Trainees to bring a credit card (not debit card) with them (Subscription purchase necessary during the course)



## Diagnostics

## VSTD39 Introduction to PassThru (Toyota)



Part Number: 1987727964

#### **DURATION:**

1 Day

#### TRAINING GOAL:

On successful completion of VSTD39, delegates will be able to:

- Complete a subscription process using their own laptop
- Load the Toyota software, and configure the KTS interface for PassThru capability
- Connect to a vehicle using the KTS as a PassThru device for use with the Toyota portal and carry out a comprehensive diagnostic routine
- Leave the course with a functional solution to Toyota PassThru (Subject to successful completion of the prerequisites listed below)

#### **CONTENT:**

- Introduction to PassThru
- Explanation of the different subscription types and processes
- Computer set-up
- Configure KTS as a PassThru interface (Workshop World)
- Navigation of the PSA & Opel / Vauxhall Portal
- Carry out practical exercises

#### PREREQUISITES:

- Trainees to bring a Windows 10 Laptop and KTS 560/590 or KTS350 loaded with Windows 10
- Trainees to bring a credit card/debit card with them (Subscription purchase necessary during the course)

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VSH22-VC Online Electric/Hybrid Vehicle Systems Awareness

Part Number: 1987726036





#### **DURATION:**

2 x Two-hour online modules

#### TRAINING GOAL:

This course is for any staff in a job role that places them in and around Hybrid or Electric vehicles. It is for delegates operating in a non-technical role, who need to gain the knowledge to work safely within the automotive retail industry, as it continues to see an increase in Electric and Hybrid vehicles. This could include managers, bodyshop staff, valeters, parts advisors, sales and aftersales staff, recovery personnel, drivers, showroom cleaners etc.

It is designed to provide learners with an overview of safe working practices, the dangers and the precautions required when near Electric and Hybrid vehicles.

#### **CONTENT:**

- The types of Electric/Hybrid vehicles available
- Hazards associated with vehicle high energy electrical systems
- Working safely around Electric/Hybrid vehicles

#### PREREQUISITES:

No prerequisites are required for this course.

"An excellent overview course, suitable for all job roles and for anyone looking to gain an awareness of electric and hybrid vehicles."

VSH267-B Online/Blended Hybrid & Electric Vehicle Systems IMI Level 3





Part Number: 1987726041

Combined Level 2 and 3 Award in Electric/Hybrid Vehicles Repair and Replacement (IMI - 603/1468/0)

#### **DURATION:**

5 x Two-hour online modules, plus a half day face-to-face Practical Assessment

#### TRAINING GOAL:

On successful completion of VSH267-B, delegates will be able to:

- Have gained knowledge and skills of high voltage component replacement
- Be awarded IMI Level 3 Award in Electric/Hybrid Vehicle System Repair and Replacement (IMI 603/1468/0)

#### **OVERVIEW:**

Please see VSH267 (page 14) for full course overview.

#### **CONTENT:**

- Module 1: Online Health & Safety for High Voltage vehicles
- Module 2: Online HV components and operation
- Module 3: Online Batteries and power management
- Module 4: Online Power electronics and Propulsion
- Module 5: Online Practical assessment preparation
- Module 6: F2F Practical assessment and online exam

#### **PREREQUISITES:**

Individuals interested in taking this course will need to possess appropriate vehicle maintenance and repair knowledge and skills at Level 3. Candidates must complete pre-learning before attending this course, using material supplied on course booking. This will be assessed during the course.



### **Alternative Drives**

VSH28-B Online/Blended Hybrid & Electric Vehicle Systems IMI Level 4





Part Number: 1987726185

IMI Level 4 Award in the Diagnosis, Testing and Repair of Electric/Hybrid Vehicles and Components (IMI 610/0975/1)

#### **DURATION:**

6 x Two-hour online modules, plus a half day face-to-face Practical Assessment

#### TRAINING GOAL:

This qualification is designed for motor vehicle professionals who maintain and repair Hybrid Electric Vehicles (HEV) technologies, including HEV drive and batteries. The course will give technicians the knowledge and skills to be able to work on or near LIVE high voltage HEV. This course contains information for carrying out diagnosis, repairs, and replacement of high voltage components whilst working safely.

#### CONTENT:

- Module 1: Online HV safety overview
- Module 2: Online E machine/motor-generator, HV Insulation testing
- Module 3: Online Batteries
- Module 4: Online HV control System relays, DC-DC converter
- Module 5: Online Propulsion
- Module 6: Online Assessment preparation
- Module 7: F2F Practical assessment
- Written assignment (min. 1000 words) to be completed within 4 weeks of the practical assessment

#### PREREQUISITES:

- The IMI require applicants to hold a Level 3 HEV Systems qualification and 6 months experience with HEV Systems
- Candidates must also complete pre-learning before attending this course
- Level 2 & 3 HEV course notes revision



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VSH28 Hybrid and Electric Vehicle Systems IMI Level 4

NEW

Part Number: 1987726185

IMI Level 4 Award in the Diagnosis, Testing and Repair of Electric/ Hybrid Vehicles and Components (IMI 610/0975/1)

#### **DURATION:**

2 Days, plus a half day face-to-face Practical Assessment

#### **TRAINING GOAL:**

This qualification is designed for motor vehicle professionals who maintain and repair Hybrid Electric Vehicles (HEV) technologies, including HEV drive and batteries. The course will give technicians the knowledge and skills to be able to work on or near LIVE high voltage HEV. This course contains information for carrying out diagnosis, repairs, and replacement of high voltage components whilst working safely.

#### **CONTENT:**

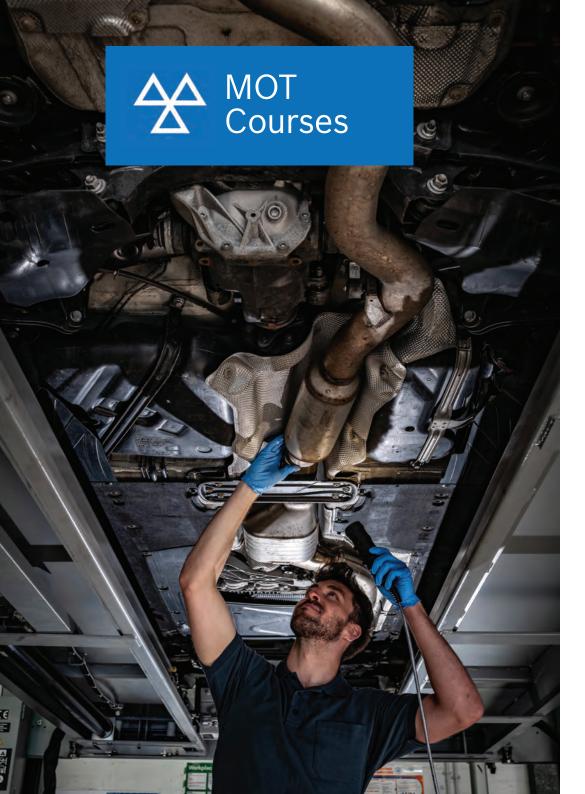
- HV safety overview
- E machine/motor-generator, HV Insulation testing
- Batteries
- HV control System relays, DC-DC converter
- Propulsion
- Assessment preparation
- Practical assessment
- Written assignment (min. 1000 words) to be completed within 4 weeks of the practical assessment

#### **PREREQUISITES:**

- The IMI require applicants to hold a Level 3 HEV Systems qualification and 6 months experience with HEV Systems
- Candidates must also complete pre-learning before attending this course
- Level 2 & 3 HEV course notes revision







## **MOT Courses**



## LVINT Light Vehicle Inspection Pre-Assessment Training

Part Number: 1987727677

#### **DURATION:**

2 Days

#### **TRAINING GOAL:**

The aim of this training course is to equip the candidate with the key fundamental knowledge for them to undertake the IMI LV Inspection accreditation (ATALVIN) on page 74 with confidence. The IMI LV Inspection accreditation has been designed to replace the NTTA (that was delivered by DVSA and is no longer available) and is for vehicle technicians who do not hold the relevant qualifications for them to directly access the MOT Tester training.

Successful completion of the LV Inspection accreditation will enable the candidate to progress into MOT Tester training and ultimately become an MOT Tester.

#### **CONTENT:**

- PPE, VPE & Best Practice
- Electricity; what it is and how to test electrical circuits
- Steering & suspension systems & how to test them
- Braking system Inspection plus performance analysis
- Supplementary Restraint Systems, how to test
- Vehicle Construction
- Exhaust Emission testing & closed-loop control
- Vehicle appraisal (including an inspection routine)

#### PREREQUISITES:

We recommend that for the candidate to get the most from this training course, they have experience of, and are familiar with, the day-to-day service & repair procedures used within the motor trade.

## **MOT Courses**

## MOT1 MOT Tester Training (Class 4 & 7)



Part Number: 1987727681

#### **DURATION:**

4.5 Days

#### TRAINING GOAL:

The objective of this course is to develop and hone a technician's existing skills and knowledge, thus enabling them to carry out the statutory vehicle inspection as laid down by the secretary of state for transport. It will include both the theory and practical sides of vehicle testing, plus associated material, referencing the MOT testers manual whenever necessary.

#### **CONTENT:**

- Working safely within a vehicle test station
- Communicating with colleagues and customers
- Managing and maintaining your CPD
- Carrying out vehicle pre-MOT checks
- Carrying out an MOT test

#### **PREREQUISITES:**

- To have a full and current driving license for the classes you want to test
- To be a skilled technician with at least 4 years full-time employment within the service & repair sector in which you wish to test
- To have NO unspent convictions for criminal offences connected with the MOT scheme or the motor trade, or involving acts of violence or intimidation
- To be of "good repute"
- To have an "appropriate" recognised qualification (full list of qualifications available upon request)

Please ensure you complete the 'Creating an MOT Account' and 'Generating a Driving Licence Check Code' documents located within the 'details' section prior to the course. Please bring your Driving Licence and DVLA Check Code along with you to the course.

Note: MOTA1 (page 75 of this catalogue) must be booked at the same time as this course.

## **MOT Courses**

## MOT3 MOT Test Centre Management



Part Number: 1987727683

#### **DURATION:**

2 Days

#### TRAINING GOAL:

This qualification is primarily developed for learners who wish to run an MOT Vehicle Test Station (VTS), or who will have direct responsibility for MOT operations at the VTS in the future. This qualification will be of interest to those individuals wishing to set up an MOT testing Station, or who may already be an MOT Tester and wish to advance their career further.

#### **CONTENT:**

- Managing the legislative and compliance requirements of a VTS
- Test centre quality systems and audits
- Developing and supervising staff within a test centre
- Dealing with customer service problems and complaints

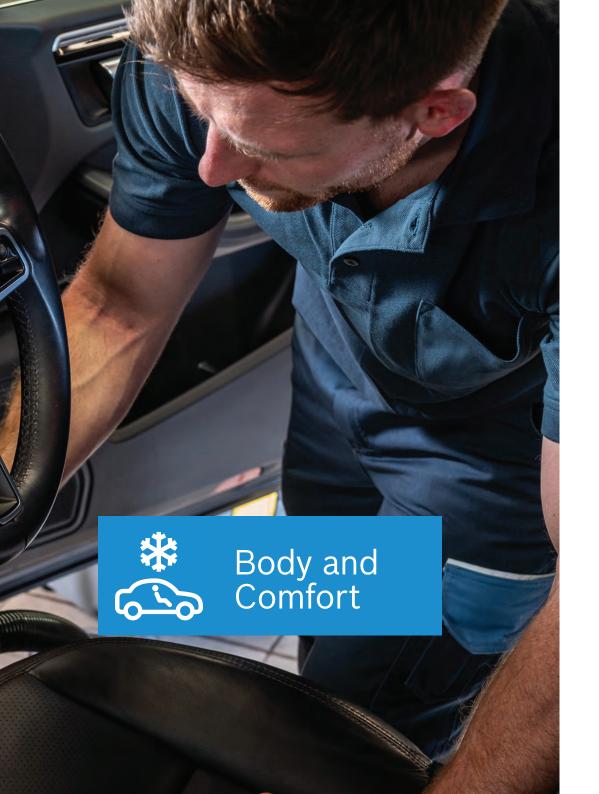
#### **ATTAINMENT:**

- The content of this qualification has been designed to cover the requirements for all prospective MOT Managers
- It is based on the suite of National Occupational Standards (NOS) developed by the IMI in conjunction with DVSA and the MOT industry in 2015

#### PREREQUISITES:

There are no formal entry requirements for this course, however, the mandatory pre-course work located within the resources section of this page must be completed prior to attending the course.

Book today at www.bosch-training-solutions.com



VSB41-B Online/Blended Advanced Driver Assistance Systems (ADAS)



Level 2 IMI Accreditation in ADAS - Calibration





#### **DURATION:**

3 x Two-hour online modules, plus a half day face-to-face practical assessment

#### TRAINING GOAL:

This course is designed for vehicle technicians and body repair workshops who are working on ADAS equipped vehicles. The course will contain information on the various systems fitted. Trainees will have the opportunity to carry out the calibration of different ADAS sensors, using the Bosch DAS 3000. The assessment consists of both an online multiple-choice & practical assessment.

#### **CONTENT:**

- Module 1 (Online): Workshop set up, wheel alignment
- Module 2 (Online): ADAS Code of Practice, use of the Bosch KTS, ESI, ADAS set up & positioning software programs
- Module 3 (Online): Practical tasks featuring DAS 3000, PPE, VPE, Best Practice & assessment preview
- Module 4 (F2F): IMI AOM 230 assessment & online knowledge assessment

#### **PREREQUISITES:**

Trainees must submit an IMI Candidate Registration Form. Knowledge of wheel alignment (VSC28) & diagnostic tools would be beneficial.



VSB41 Advanced Driver Assistance Systems (ADAS)

Part Number: 1987727988

Level 2 IMI Accreditation in ADAS - Calibration





#### **DURATION:**

2 Days, including a practical and online knowledge assessment

#### TRAINING GOAL:

This course is designed for vehicle technicians and body repair workshops who are working on ADAS equipped vehicles. The course will contain information on the various systems fitted. Trainees will have the opportunity to carry out the calibration of different ADAS sensors, using the Bosch DAS 3000. The assessment consists of both an online multiple-choice & practical assessment.

#### **CONTENT:**

As with the Online/Blended version, the same topics will be covered in classroom/workshop face-to-face sessions, these being:

- Workshop set up, wheel alignment
- ADAS Code of Practice, use of the Bosch KTS, ESI, ADAS set up
- Practical tasks featuring DAS 3000, PPE, VPE, Best Practice & assessment preview
- IMI AOM 230 assessment & online knowledge assessment

#### **PREREQUISITES:**

Trainees must submit an IMI Candidate Registration Form. Knowledge of wheel alignment (VSC28) & diagnostic tools would be beneficial.



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VSB43-VC Online Vehicle Safety Systems – Airbag

Part Number: 1987726036





#### **DURATION:**

1 x Two-hour online module

#### TRAINING GOAL:

This course is designed for vehicle technicians who may not have the time to attend a face-to-face training event, but would like to learn a little more about vehicle safety systems, and in this instance – specifically airbags. The course will contain information on the sensing and actuation of the airbag systems including diagnostic information, wiring testing and some 'top-tips'.

#### **CONTENT:**

- Active & Passive safety systems
- Crash phases
- ECU operation and sensing elements
- Igniter (both airbag and pre-tensioner) actuation
- Wiring and general testing

#### **PREREQUISITES:**

Basic motor vehicle knowledge and an appetite to learn.

## Chassis and Braking

## VSC42-VC Online Vehicle Safety Systems - Braking

Part Number: 1987726036





#### **DURATION:**

2 x Two-hour online modules

#### TRAINING GOAL:

This course is designed for vehicle technicians who may not have the time to attend a face-to-face training event but would like to learn a little more about vehicle safety systems, and in this instance – specifically braking. The course will contain information on the various systems fitted, diagnostic information and some 'top-tips'.

#### **CONTENT:**

- Active & Passive safety systems
- Conventional braking and multiplication of force
- Anti-lock Braking Systems, Traction Control Systems & Electronic Stability Program
- Electronic parking brake
- Diagnostic brake bleeding procedure

#### **PREREQUISITES:**

Basic motor vehicle knowledge and an appetite to learn.

## Chassis and Braking

VSC44-VC Online Vehicle Safety Systems - TPMS

Part Number: 1987726036





#### **DURATION:**

1 x Two-hour online module

#### TRAINING GOAL:

This course is designed for vehicle technicians who may not have the time to attend a face-to-face training event, but would like to learn a little more about vehicle safety systems, and in this instance – specifically TPMS. The course will contain information on the two types of systems, how they work and how to programme them.

#### **CONTENT:**

- Active & Passive safety systems
- Direct and indirect sensing
- Components
- Programming

#### PREREQUISITES:

Basic motor vehicle knowledge and an appetite to learn.

### Diesel

## VSD46-VC Online Vehicle Fuel Systems - Diesel

Part Number: 1987726036





#### **DURATION:**

2 x Two-hour online modules

#### TRAINING GOAL:

This course is designed for vehicle technicians who may not have the time to attend a face-to-face training event but would like to learn a little more about Common Rail Diesel vehicles. The course will contain information on the various subsystems fitted. Learn effective and efficient testing routines that will save your workshop time and money.

#### **CONTENT:**

- Low-pressure supply system, component layout and functions
- How to test the low-pressure system and diagnose faults
- High-pressure generation and control, component layout and functions, including system fault diagnosis
- Injector testing, how to test Common Rail injectors and diagnose faults on and off the vehicle
- There will also be a series of short videos to support the test and diagnostic routines including some 'top-tips'

#### **PREREQUISITES:**

Basic motor vehicle knowledge and an appetite to learn.

## Diagnostics VSTD51-VC Online

Known Fixes, Tips & Tricks

Part Number: 1987726036





#### **DURATION:**

1 x Two-hour online module

#### TRAINING GOAL:

On successful completion of VSTD51-VC, delegates will be able to:

- See 10 common known fixes, tips & tricks from 10 different manufacturers
- Gain valuable knowledge seeing one known fault/symptom with its associated diagnostic process

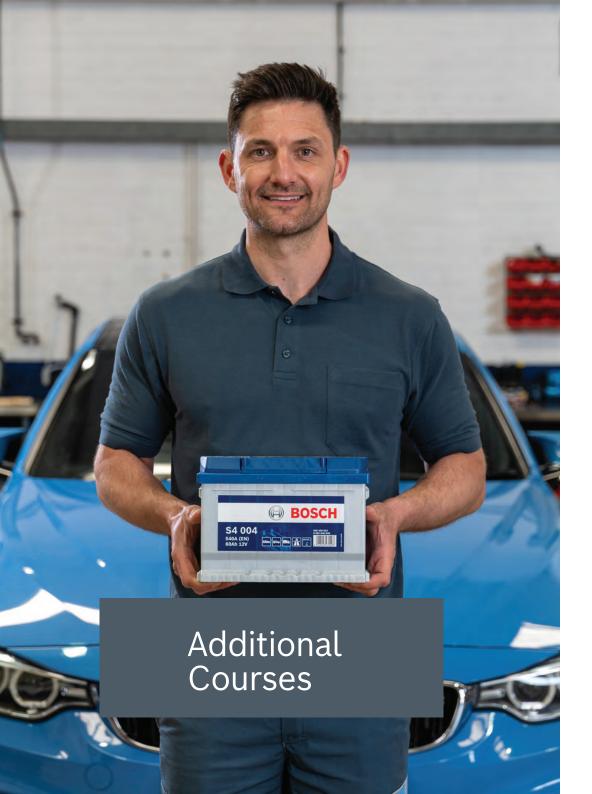
This course is designed for workshop technicians who find themselves pushed for time. Why not use our knowledge and experience to easily identify, diagnose and repair common faults across a broad range of manufacturers? This is intended as an entry-level course for technicians with little or no diagnostic experience.

#### **CONTENT:**

- 10 known fixes from 10 different manufacturers
- Vehicles ranging alphabetically from Audi to Kia
- Faults relating to engine, chassis, electrical & body systems
- Tips, tricks & additional information
- Diagnostic process

#### PREREQUISITES:

There are no prerequisites for attending this course.



## Electrical Systems and Flectronics



## VSE32 Battery Management Systems & Start/Stop Technology

Part Number: 1987727502

#### **DURATION:**

2 Days

#### **TRAINING GOAL:**

On successful completion of VSE32, delegates will be able to:

- Carry out diagnostic test procedures to identify faults in conventional and smart charge systems
- Complete tests on typical Start/Stop systems that are used to locate faults in the system components and wiring using Bosch test equipment
- Complete a system test of typical Battery management systems and be able to complete a system battery adaption process using a Bosch diagnostic tester

#### **CONTENT:**

- Battery technology
- Conventional starting system
- Start/Stop systems
- Conventional charging system
- Smart charging systems
- Battery management

#### PREREQUISITES:

Delegates are expected to be familiar and competent in the use of a vehicle system diagnostics tester and the application of correct electrical test methods.



# Business Skills CS1 Customer Care



Part Number: 1987727592

#### **DURATION:**

1 Day

#### **TRAINING GOAL:**

On successful completion of CS1, delegates will be able to:

- Identify the key skills required in providing excellent customer service
- Compare the application of good and bad customer service using case studies and group activities
- Utilise the principles of best practice in customer care and apply defined improvements to benefit the business and working environment

#### **CONTENT:**

- Why customer service is important
- Understanding your customer needs
- Common problems and complaints
- How to deliver outstanding customer service
- Finding out what your customers think
- Case studies and practical exercises

#### **TARGET GROUP:**

Any workshop staff, including front of house staff, wishing to gain an overview of customer care.

## **Business Skills**

### Module 1 Operational Optimisation Bosch Service Excellence



Business Skills

Part Number: 1987726742

Module 2 Service Centre Management Bosch Service Excellence



Part Number: 1987716645

#### **DURATION:**

2 Days

#### TRAINING GOAL:

To create the best possible and most efficient service centre that is managed by means of the performance data collected.

#### **CONTENT:**

- Operational optimisation of one's own service centre with a basic understanding of Key Performance Indicators (KPI) as a management tool
- How and what data is collected for the definition of KPIs
- Read-out of KPI data causality / action / measurement / adaptation
- Plan of action is established
- Final test of achievement of learning objectives

#### **DURATION:**

2 Days

#### TRAINING GOAL:

To develop and strengthen the participants' understanding of their own personality and action patterns in connection with management tasks at one's own service centre.

#### **CONTENT:**

- Service centre management with a basic understanding of personal management tools
- Service centre management with a focus on an efficient workflow and FIRFT
- Design of the management plan for one's own service centre
- Final test of achievement of learning objectives





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### **Business Skills**

Module 3
Customer Satisfaction
and Loyalty
Bosch Service Excellence



Part Number: 1987716953

#### **DURATION:**

2 Days

#### TRAINING GOAL:

To develop and strengthen the participants' understanding of customer satisfaction and customer loyalty, and to develop and strengthen the participants' ability to sell more services and products, at the same time, also to B2B and fleet customers.

#### **CONTENT:**

- Retention of customers, winning new customers and follow-up on service centre visits
- Customer satisfaction, strategy and objectives
- Service behaviours, service promises
- B2B customers, fleet customers, strategy development for the B2B area
- Plan of action for strengthening customer satisfaction and loyalty
- Final test of achievement of learning objectives

## Available to Bosch Car Service Only

## **Business Skills**

Module 4
Customer Complaints,
Warranties and Goodwill
Bosch Service Excellence



Part Number: 1987727583

#### **DURATION:**

2 Days

#### TRAINING GOAL:

To develop and strengthen the participants' ability to handle customer complaints and warranty claims, and to turn the customer experience into something positive, whether the complaints are submitted at one's own service centre or on social media. To strengthen understanding and insight in connection with the calculation and sale of service agreements.

#### **CONTENT:**

- Warranty and goodwill (law and practice) handling of customer complaints at the service centre
- Handling of social media in connection with customer complaints
- Service agreements, background, calculation, risk profile
- Sales and marketing of service agreements
- Plan of action
- Final test of achievement of learning objectives



## **Business Skills**

Module 5 Personnel Selection and Recruitment Bosch Service Excellence



Part Number: 1987716952

#### **DURATION:**

2 Days

#### TRAINING GOAL:

To strengthen the participants' ability to hire the best employees, develop the ability to have an eye for talent, and be able to distinguish between good and really good employees. We will give the participants the tools and techniques needed to employ better-qualified employees, and thus establish a better business.

#### **CONTENT:**

- Personnel selection and recruitment of new employees
- How do you recruit: What media and methods do you use
- "Human capital": The biggest indicator of your success
- Recruitment, interviewing and onboarding procedures
- Maintenance of "human capital"
- Final test of achievement of learning objectives





Module 6 Sales and Branding Bosch Service Excellence



Part Number: 1987727545

#### **DURATION:**

2 Days

#### TRAINING GOAL:

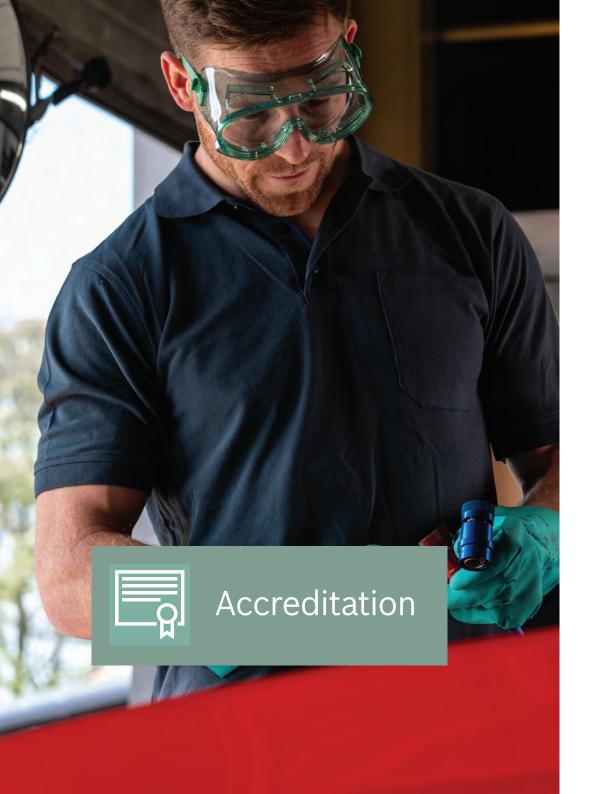
To develop and strengthen the participants' understanding of brand value to generate additional income and customer loyalty, and to develop and strengthen the participants' ability to sell more services and associated products at the same time.

#### **CONTENT:**

- How to use the Bosch Car Service brand in the right way
- How the benefits and values of the brand's history and customer perception are illustrated
- Sales of services: Financial argumentation
- Properties, benefits, dividends, sale of products (value-based selling)
- Final test for achievement of learning objectives



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## Accreditation



AC1RHA Automotive Air Conditioning Refrigerant Handling Certification (L3QCF)

Part Number: 1987727792

#### **DURATION:**

1 Day

#### **ASSESSMENT GOAL:**

Delegates successfully completing the Institute of the Motor Industry online test and practical assessment of AC1RHA will be certificated by IMI. Under current legislation, it will provide certification for an unlimited period.

#### **CONTENT:**

An online test and practical test for the assessment of competency.

#### **PREREQUISITES:**

We recommend that candidates who require formal training in Air Conditioning work attend our separate 2-day training course VSB26. Alternatively, candidates should bring evidence that they have attended previous air conditioning training from another training provider.



## Accreditation

## ATALVIN Light Vehicle Inspection Technician



MOTA1 MOT Tester Training (Class 4 & 7) - Assessment



Part Number: 1987727793

#### **DURATION:**

1 Day

#### **ASSESSMENT GOAL:**

Following the completion of the LVINT training course (on page 49 of this catalogue) candidates will have the underpinning fundamental knowledge to enable them to participate in this IMI Light Vehicle Inspection assessment, which in turn will allow them to move forward into the formal MOT Tester training programme.

#### **CONTENT:**

- Emission System: Inspection
- Electrical System: Inspection
- Braking Systems: Inspection
- Steering & Suspension System: Inspection
- Vehicle Appraisal: Inspection

#### **PREREQUISITES:**

Successful completion of the LVINT course.

# IMI INSTITUTE OF THE MOTOR INDUSTRY

#### **DURATION:**

1 Day

#### **ASSESSMENT GOAL:**

Accreditation

MOTA1: MOT Tester Training (Class 4 & 7) Assessment is the assessment following the MOT Tester Training (Class 4 & 7) which must be booked in addition to the course.

#### **CONTENT:**

- Working safely within a vehicle test station
- Communicating with colleagues and customers
- Managing and maintaining your CPD
- Carrying out vehicle pre-MOT checks
- Carrying out an MOT test

#### **PREREQUISITES:**

- To have a full and current driving license for the classes you want to test
- To be a skilled technician with at least 4 years full-time employment within the service & repair sector in which you wish to test
- To have NO unspent convictions for criminal offences connected with the MOT scheme or the motor trade, or involving acts of violence or intimidation
- To be of "good repute"
- To have an "appropriate" recognised qualification (See list on www.bosch-training-solutions.com)



Book today at www.bosch-training-solutions.com

## Accreditation

## ATABDT IMI Bosch Diagnostic Technician



Accreditation

Part Number: 1987727581

### ATABMT IMI Bosch Master Technician



Part Number: : 1987727543

#### **DURATION:**

1 Day

#### **CONTENT:**

Assessments:

- Mechanical Systems Diagnosis
- Electrical Systems Diagnosis
- Computer Based Test Equipment Diagnosis
- Vehicle Safety System Diagnosis
- Wheel Alignment
- Online test General Vehicle Technology

#### **PREREQUISITES:**

Completion of all courses in the Bosch Diagnostic Technician Programme.

#### **DURATION:**

1 Day

#### CONTENT:

Assessments:

- Electrical Systems Diagnosis
- Electrical Systems Scantool
- Computer Based Test Equipment
- Instructional Support
- Customer Liason
- Online Test General Vehicle Technology

#### **PREREQUISITES:**

Completion of all courses in the Bosch Master Technician Programme.





## **Training Locations**

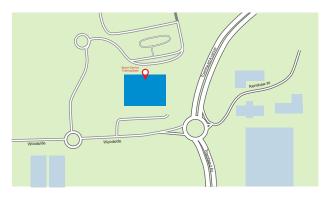
## Dedicated facilities for training automotive technicians



Bosch Service Training Centre (STC) Broadwater Park North Orbital Road Denham UB9 5HJ



Bosch Training Facility Parkside Business Park Spinners Road Doncaster DN2 4I T



Bosch Service Training Base (STB) Woodside Eurocentral Motherwell Scotland ML1 4XL

## **Bosch Training Facilities**

Wherever you attend Bosch training courses, you can expect the same exceptional standards, in terms of modern classroom and workshop facilities, the latest equipment and of course dedicated trainers.

We have a choice of training centres around the UK, all with free parking, free WiFi and excellent catering services.

All of our locations have easy access by road and public transport, so no matter where you are in the UK, one of our training centres is never too far away.



# What drives you, drives us

Bosch technologies are used in most vehicles worldwide. People, and assuring their mobility, is what we are focused on.

Therefore, we have dedicated over 130 years of pioneering spirit and expertise in research and manufacturing to achieving this.

We provide the aftermarket and workshops worldwide with modern diagnostic and workshop equipment and a wide range of spare parts for passenger cars and commercial vehicles:

- ► Solutions for efficient and effective vehicle repairs
- ▶ Innovative workshop equipment and software
- One of the world's most comprehensive ranges of new and exchange parts
- Large network of wholesale customers, for quick and reliable parts supply
- ▶ Competent technical support
- ▶ Comprehensive educational and training offers
- ► Targeted sales and marketing support

## Find out more at: bosch-training-solutions.com

#### Contact us:

SAA.Training@uk.bosch.com

#### **Bosch Service Training Centre**

Broadwater Park North Orbital Road Denham UB9 5HJ

UNITED KINGDOM