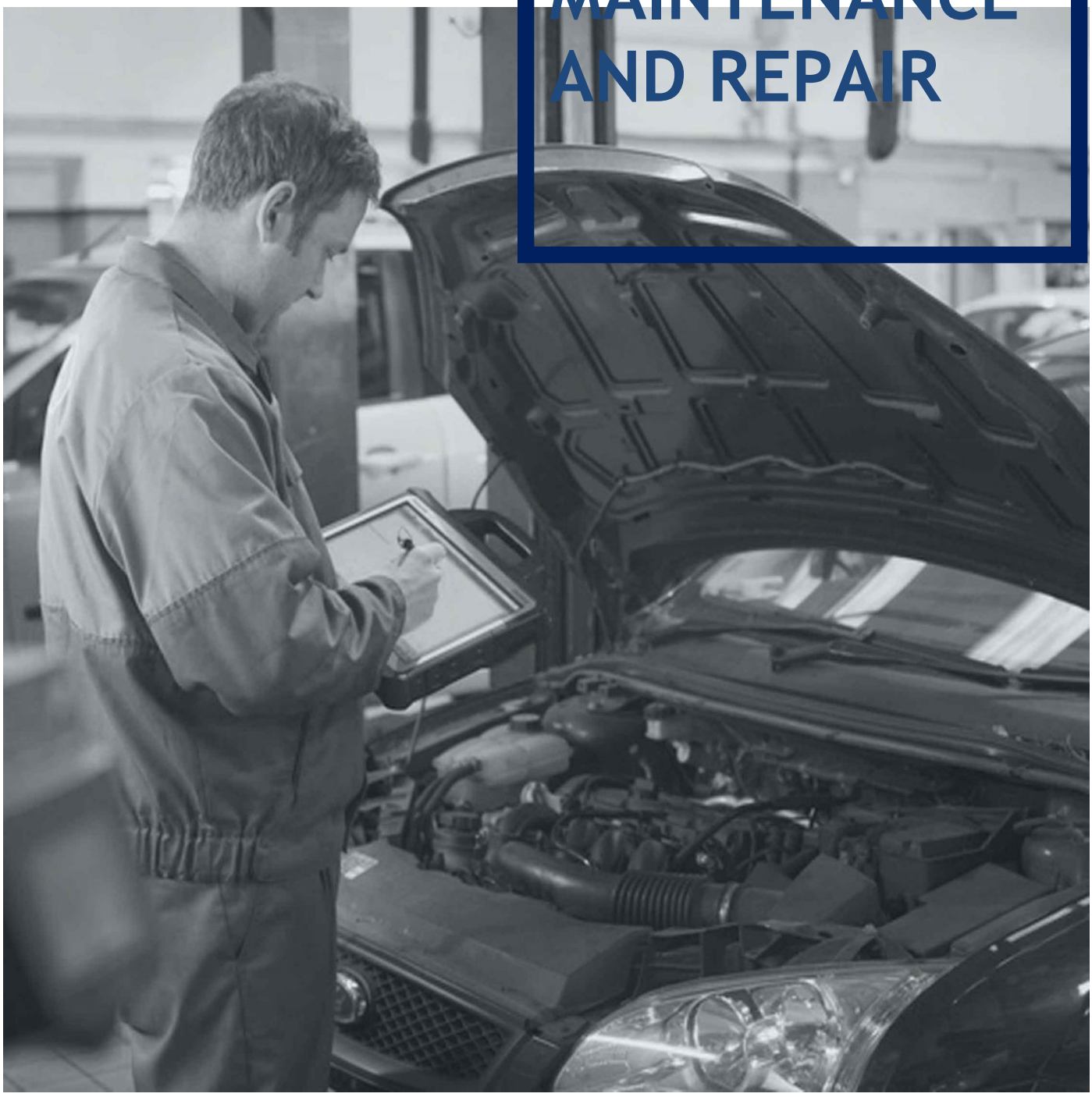
IMI ACCREDITATION

LIGHT VEHICLE MAINTENANCE AND REPAIR



What is IMI Accreditation?	

IMI Accreditation is a practical, non-academic way to demonstrate individual capability, providing independent proof of current competence, knowledge and skills.

Focused on the Light Vehicle area of the automotive sector, IMI Accreditation encompasses everyone within this area, from individuals working directly on vehicles to those advising customers or managing a dealership. Three different types of accreditation reflect the diverse range of roles within the motor industry: Technical, Customer-facing, and Management.

Accreditation typically takes just one day to achieve (depending on the specific route), with individuals assessed against industry-agreed standards. Each accreditation route is designed using best practice techniques, and offers multiple career development options for a specific job role.

Accreditation is available for the following routes:	

- Technical
- Customer-facing
- Management

Once an individual has passed all the required practical and knowledge-based modules in a specific route, they will receive a certificate of achievement which is valid for three years.

IMI Accreditation benefits

IMI Accreditation was created to help the motor industry keep on top of constant, rapid changes in technology, legislation and working methods, by encouraging and measuring the current competence, knowledge and ability of those working within it. By providing proof of current competence, IMI Accreditation benefits both individuals and their employers.

Those gaining accreditation receive:

- An IMI Accredited certificate
- Inclusion on IMI Professional Register
- Industry-wide recognition of their skills and abilities
- Advice and guidance for development
- An opportunity for career progression

While the employer of an accredited individual benefits from:

- Confidence in the individual's ability
- Eligibility for British Standard / DVSA requirements (depending on routes)
- Increased customer visibility on the IMI Professional Register
- Higher work output and fewer mistakes
- Public confidence in abilities

Industry Recognition through the IMI Professional Register

The IMI Professional Register is an industry-wide database of professionals in the motor industry. The Register is promoted to consumers as a place to find trustworthy professionals who have proven their skills and competence within specialist areas of the industry. IMI Accredited individuals are automatically included on the IMI Professional Register.

Routes to Accreditation

There are two routes to gaining IMI Accredited status: Full Assessment, and Conversion. Full Assessment involves the completion of all practical and knowledge-based assessments at each level. Conversion enables an individual to use existing qualifications to gain exemption from specific modules.

IMI Accreditation continually evolves to meet the changing needs of the industry, with each accreditation valid for three years, after which time an individual is required to undertake a new assessment either at the same level, next career level or a different route in order to prove their current competence.

IMI Accreditations are delivered through the IMI approved Centre network, and you can find your nearest Centre or explore assessment routes at www.theimi.org.uk/awarding.

Who is the Light Vehicle (LV) Maintenance and Repair for?	

The IMI Light Vehicle Maintenance and Repair route is intended for technicians whose job role involves the inspection, maintenance and repair of light vehicles.

There are three levels within Light Vehicle Maintenance and Repair:

- Service Maintenance Technician
  The technician should be working in the light vehicle sector of the industry and ideally have at least two years' experience to ensure they are familiar with the skills, knowledge and techniques required to service, maintain and repair vehicles.

- Diagnostic Technician
  The technician should be working in the light vehicle sector of the industry and ideally have at least three years' experience to ensure they are familiar with the skills, knowledge and techniques required to diagnose system faults, rectify the faults including replacing components and return the vehicle systems to manufacturer specification.

- Master Technician
  The technician should be working in the light vehicle sector of the industry and ideally have at least five years' experience to ensure they are familiar with the skills, knowledge and techniques required to diagnose system faults, rectify the faults including replacing components, liaise with customers at all levels and be able to transfer their technical knowledge to others such as apprentices and technicians.

LV Maintenance and Repair Route Structure	

Those wishing to achieve IMI accreditation will be required to use the following method:

- Full Assessment

For those wishing to retain their accreditation there are two options, these are:

- Full Assessment
  or
- AOM Update

Note: In order to re-accredit using 'AOM Updates' (Assessed Outcome Modules) the technicians accreditation must remain valid throughout the assessments and until all of the prescribed AOMs have been passed. Should the accreditation expire beforehand, the technician will be required to re-take a 'full assessment'.

Service Maintenance Technician	Full Assessment

This level requires the technician to complete the following modules:

Mechanical Systems	AOM 057
Basic Electrical Systems	AOM058
Basic Computer Based Test Equipment	AOM 059
Basic Braking Systems	AOM 060
Vehicle Safety Inspection	AOM 061

This will normally be a one day assessment.

Diagnostic Technician	Full Assessment

This level requires the technician to complete the following modules:

Four Wheel Alignment - Interpretation of Data	AOM 013
Mechanical System Fault Diagnosis	AOM 062
Electrical System Fault Diagnosis	AOM 063
Computer Based Test Equipment Fault Diagnosis	AOM 064
Vehicle Safety Systems	AOM 065

This will normally be a one-day assessment.

Master Technician	Full Assessment

This level requires the technician to complete the following modules:

Electrical Systems - Complex	AOM 066
Electrical Systems (Diagnosis/Scan Tool Diagnosis) - Complex	AOM 067
Computer Based Test Equipment - Complex	AOM 068
Instructional Support	AOM 069
Customer Liaison	AOM 070

This will normally be a one-day assessment.

Service Maintenance Technician	AOM Update Reaccreditation only

This level requires the technician to complete the following modules:

Basic Electrical Systems	AOM 058
Basic Computer Based Test Equipment	AOM 059
Vehicle Safety Inspection	AOM 061

This may either be achieved through a one-day assessment or may be spread over the duration of the individual's existing IMI accreditation.

Diagnostic Technician	AOM Update Reaccreditation only

This level requires the technician to complete the following modules:

Electrical System Fault Diagnosis	AOM 063
Computer Based Test Equipment Fault Diagnosis	AOM 064
Vehicle Safety Systems	AOM 065

This may either be achieved through a one-day assessment or may be spread over the duration of the individual's existing IMI accreditation.

Master Technician	AOM Update Reaccreditation only

This level requires the technician to complete the following modules:

Electrical Systems - Complex	AOM 066
Electrical Systems (Diagnosis/Scan Tool Diagnosis) - Complex	AOM 067
Computer Based Test Equipment - Complex	AOM 068

This may either be achieved through a one-day assessment or may be spread over the duration of the individual's existing IMI accreditation.

Accreditation Module Title	Four Wheel Alignment - Interpretation of Data

Module Code	AOM - 013

Practical Assessment Time	45 minutes

On-line Knowledge Test	K - 013

IMI AOM Level	3

Module Overview	

This module is to assess the competence of the technician's knowledge, skill and ability to interpret data from a vehicles four wheel alignment and geometry report.

The technician will be presented with vehicle wheel alignment and geometry measurement data and be required to compare this information against vehicle manufacturer specifications to diagnose vehicle faults and make recommendations on suitable repairs to be carried out.

Technician Profile	

The technician should have successfully completed the service maintenance technician route prior to registration of the diagnostic technician accreditation or; have been be working in the light vehicle sector of the industry and have at least three years practical experience to ensure they are familiar with the skills, knowledge and techniques required to service and maintain vehicle systems to manufacturer specification including diagnosing vehicle system faults.

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Fast Fit	Service Technician
Light Vehicle Maintenance and Repair	Diagnostic Technician
MET	Senior Technician

Knowledge Requirements	
The technician must know and understand:	
2.1	selection and use of PPE and VPE
2.2	how to select and use appropriate sources of technical information
2.3	tools and equipment used to measure vehicle wheel alignment and geometry
2.4	how to evaluate the results of vehicle wheel alignment and geometry settings
2.5	how to identify vehicle wheel alignment and geometry defects
2.6	principles of wheel alignment including: Ackerman principle, steering angle inclination (SAI) / king pin inclination (KPI), caster, camber, thrust line, toe in/out, toe-out on turns, wheel set back, wheelbase and track width
2.7	the operation of vehicle suspension and steering systems including rack and pinion, hydraulic and electrical power steering
2.8	maintenance associated with vehicle suspension and steering systems
2.9	logical working procedures during the task
2.10	importance of completing all documentation clearly and accurately

Accreditation Module Title	Mechanical Systems

Module Code	AOM - 057

Practical Assessment Time	45 minutes

On-line Knowledge Test	K - 057

IMI AOM Level	2

Module Overview	
This module is to determine that the technician is able to determine the replacement of vehicle mechanical components due to wear and / or service schedules. The technician will be able to use industry / vehicle manufacturer recognised workshop procedures, tools and equipment to replace mechanical components. The technician will be required to ensure they follow all appropriate health & safety procedures and wear the necessary Personal Protection Equipment during the assessment.	

Technician Profile	
The service maintenance technician should be working in the light vehicle sector of the industry and ideally have at least two years' experience to ensure they are familiar with the skills, knowledge and techniques required to service, maintain and repair vehicles.	

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Service Maintenance Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	select and use appropriate Personal Protective Equipment (PPE) and Vehicle Protective Equipment (VPE)
1.2	select and use appropriate sources of technical information
1.3	select and use correct tools and equipment for servicing and maintaining engine mechanical components and systems
1.4	inspect the serviceability of engine mechanical components including engine timing belts, fuel injection and clutch operating systems and components and compare with manufacturer's information
1.5	replace engine mechanical components using recognised industry and manufacturer's procedures including engine timing belts, fuel injection and clutch operating system components
1.6	use safe working practices throughout the assessment
1.7	use a logical working procedure throughout the assessment
1.8	complete all documentation clearly and accurately
1.9	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	selection and use of PPE and VPE
2.2	how to select and use appropriate sources of technical information
2.3	tools and equipment used when servicing and maintaining engine mechanical components and systems
2.4	the operation of engine mechanical components including engine timing belts, fuel injection and clutch operating systems and components
2.5	the inspection and maintenance associated with engine mechanical components including engine timing belts, fuel injection and clutch operating systems and components
2.6	how to remove and replace engine mechanical components
2.7	safe working practices throughout the assessment
2.8	logical working procedures for the task
2.9	importance of completing all documentation clearly and accurately

Accreditation Module Title	Electrical Systems - Basic

Module Code	AOM - 058

Practical Assessment Time	45 minutes

On-line Knowledge Test	K - 058

IMI AOM Level	2

Module Overview	

This module is to assess the technician's knowledge, skill and ability to diagnose a simple electrical fault.

The technician will need to access vehicle information, such as component location and appropriate electrical wiring diagrams, and use these together with electrical test equipment, such as a multi-meter (volts, amps, ohms) to diagnose a system fault. Once the electrical fault has been diagnosed, the technician should have the ability to rectify the fault and check the system is functioning as per the vehicle manufacturer's original specification.

Technician Profile	

The service maintenance technician should be working in the light vehicle sector of the industry and ideally have at least two years' experience to ensure they are familiar with the skills, knowledge and techniques required to service, maintain and repair vehicles.

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Service Maintenance Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	select and use appropriate Personal Protective Equipment (PPE) and Vehicle Protective Equipment (VPE)
1.2	select and use appropriate sources of technical information including electrical wiring diagrams and component location
1.3	select and use correct tools and equipment to diagnose basic electrical faults
1.4	use appropriate diagnostic techniques to locate basic electrical system faults in vehicle windscreen washer, lighting and horn systems
1.5	correctly evaluate basic vehicle electrical system faults to vehicle windscreen washer, lighting and horn systems
1.6	carry out basic repairs to vehicle windscreen washer, lighting and horn systems
1.7	use safe working practices throughout the assessment
1.8	use a logical working procedure throughout the assessment
1.9	complete all documentation clearly and accurately
1.10	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	selection and use of PPE and VPE
2.2	how to select and use appropriate sources of technical information including vehicle wiring diagrams and component locations
2.3	tools and equipment used to diagnose basic electrical faults
2.4	electrical principles including; voltage, resistance and current flow
2.5	operation of basic electrical circuits and systems including vehicle windscreen washer, lighting and horn systems
2.6	basic maintenance associated with vehicle electrical systems
2.7	diagnostic techniques used to locate basic electrical system faults including open and short circuits, and high resistance
2.8	how to evaluate basic vehicle electrical system faults
2.9	safe working practices throughout the assessment
2.10	logical working procedures for the task
2.11	importance of completing all documentation clearly and accurately

Accreditation Module Title	Basic Computer Based Test Equipment

Module Code	AOM - 59

Practical Assessment Time	45 minutes

On-line Knowledge Test	K - 059

IMI AOM Level	2

Module Overview	
This module is to determine that the technician is able to use computer based test equipment to: locate fault codes and live data, carryout setting procedures for vehicle service lamps, brake calipers and injector coding which are used during vehicle servicing and repairs. The technician will be required to use appropriate vehicle information to locate components, carry out visual and operational checks to determine the functionality of a component. The technician will be required to ensure they follow all appropriate health & safety procedures and wear the necessary Personal Protection Equipment during the assessment.	

Technician Profile	
The service maintenance technician should be working in the light vehicle sector of the industry and ideally have at least two years' experience to ensure they are familiar with the skills, knowledge and techniques required to service, maintain and repair vehicles.	

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Service Maintenance Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	select and use appropriate Personal Protective Equipment (PPE) and Vehicle Protective Equipment (VPE)
1.2	select and use appropriate sources of technical information when using computer based testing equipment
1.3	select and use appropriate computer based testing equipment correctly
1.4	locate fault codes and live data, carryout setting procedures for vehicle service lamps, brake calipers and injector coding used during vehicle servicing and repairs
1.5	use safe working practices throughout the assessment
1.6	use a logical working procedure throughout the assessment
1.7	complete all documentation clearly and accurately
1.8	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	selection and use of PPE and VPE
2.2	how to select and use appropriate sources of technical information when using computer based test equipment
2.3	the basic operation of computer based testing equipment including: connecting to the vehicle and establishing correct communication, accessing live component data, deleting fault codes, control of actuators and adjustments, extinguishing service lamps
2.4	how to use computer based testing equipment when locating fault codes and live data, carrying out setting procedures for vehicle service lamps, brake calipers and injector coding during vehicle servicing and repairs
2.5	how to evaluate vehicle systems using computer based testing equipment
2.6	safe working practices throughout the assessment
2.7	logical working procedures for the task
2.8	importance of completing all documentation clearly and accurately

Accreditation Module Title	Basic Braking System

Module Code	AOM - 060

Practical Assessment Time	45 minutes

On-line Knowledge Test	K - 060

IMI AOM Level	2

Module Overview	

This module is to determine that the technician is able to establish the serviceability of braking system components which include; mechanical, hydraulic and electrical.

The technician will need to make recommendations regarding which components are serviceable and which will require replacement. The technician will also be required to replace components and to check their subsequent functionality conforms to vehicle manufacturer specifications.

The technician will be required to ensure they follow all appropriate health & safety procedures and wear the necessary Personal Protection Equipment during the assessment.

Technician Profile	

The service maintenance technician should be working in the light vehicle sector of the industry and ideally have at least two years' experience to ensure they are familiar with the skills, knowledge and techniques required to service, maintain and repair vehicles.

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Service Maintenance Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	select and use appropriate Personal Protective Equipment (PPE) and Vehicle Protective Equipment (VPE)
1.2	select and use appropriate sources of technical information when working on light vehicle braking systems
1.3	select and use correct tools and equipment to inspect and maintain light vehicle braking systems and components
1.4	use appropriate techniques to inspect and maintain light vehicle braking systems
1.5	use the correct procedures to remove and replace brake systems components
1.6	use safe working practices throughout the assessment
1.7	use a logical working procedure throughout the assessment
1.8	complete all documentation clearly and accurately
1.9	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	selection and use of PPE and VPE
2.2	how to select and use appropriate sources of technical information when working on light vehicle braking systems
2.3	tools and equipment used to inspect, check the serviceability and to remove and replace braking system components
2.4	operation of light vehicle braking systems including: mechanical, hydraulic and electrical components including anti-lock braking systems (ABS) and electronic brake distribution systems (EBD)
2.5	inspection and maintenance associated with light vehicle braking systems
2.6	basic diagnostic techniques used to locate light vehicle braking system faults
2.7	how to remove and replace light vehicle braking system components
2.8	how to evaluate the correct operation of replacement light vehicle braking system components
2.9	safe working practices throughout the assessment
2.10	logical working procedures for the task
2.11	importance of completing all documentation clearly and accurately

Accreditation Module Title	Vehicle Inspection

Module Code	AOM - 061

Practical Assessment Time	45 minutes

On-line Knowledge Test	K - 061

IMI AOM Level	2

Module Overview	
This module is to ensure the technician has the ability to carry out a vehicle inspection using a logical working method, routine and appropriate workshop tools and equipment. The technician will be able to identify the processes and techniques needed to rectify vehicle system faults and recommend any actions required for repair.	

Technician Profile	
The technician should be working in the light vehicle sector of the industry and ideally have at least two years' experience to ensure they are familiar with the skills, knowledge and techniques required to service, maintain and repair vehicles.	

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Fast Fit	Service Technician
Light Vehicle Maintenance and Repair	Service Maintenance Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	select and use appropriate Personal Protective Equipment (PPE) and Vehicle Protective Equipment (VPE)
1.2	select and use appropriate sources of technical information when carrying out a vehicle safety inspection
1.3	select and use correct tools and equipment to carry out a vehicle safety inspection
1.4	use appropriate methods and techniques to inspect vehicle systems and components
1.5	accurately identify vehicle system and component defects
1.6	complete a vehicle condition report
1.7	use safe working practices throughout the assessment
1.8	use a logical working procedure throughout the assessment
1.9	complete all documentation clearly and accurately
1.10	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	selection and use of PPE and VPE
2.2	how to select and use appropriate sources of technical information when carrying out a vehicle safety inspection
2.3	tools and equipment used to carry out a vehicle safety inspection
2.4	the operation of the following vehicle systems : a. engine and transmission b. suspension and steering c. braking and electrical systems d. wheels and tyres e. body systems
2.5	how to inspect the following vehicle systems and components for defects: a. engine and transmission b. suspension and steering c. braking and electrical systems d. wheels and tyres e. body systems
2.6	how to accurately complete a vehicle safety inspection checklist and report any faults
2.7	safe working practices throughout the assessment
2.8	logical working procedures for the task
2.9	importance of completing all documentation clearly and accurately

Accreditation Module Title	Engine Mechanical System Fault Diagnosis

Module Code	AOM - 062

Practical Assessment Time	45 minutes

On-line Knowledge Test	K – 062

IMI AOM Level	3

Module Overview	

This module is to determine that the technician is able to inspect, measure, adjust and diagnose engine mechanical component defects using suitable tools and equipment and comparing measurements to manufacturer's specifications. As a result, the technician will make recommendations on the serviceability of engine components and systems.

The technician will be required to ensure they follow all appropriate health & safety procedures and wear the necessary Personal Protection Equipment during the assessment.

Technician Profile	

The technician should have successfully completed the service maintenance technician route prior to registration of the diagnostic technician accreditation or; have been working in the light vehicle sector of the industry and have at least three years practical experience to ensure they are familiar with the skills, knowledge and techniques required to service and maintain vehicle systems to manufacturer specification including diagnosing vehicle system faults.

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Diagnostic Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	select and use appropriate Personal Protective Equipment (PPE) and Vehicle Protective Equipment (VPE)
1.2	select and use appropriate sources of technical information when inspecting and checking the serviceability of engine mechanical components
1.3	select and use correct tools and equipment to inspect, measure, adjust and check the serviceability of engine mechanical components
1.4	use appropriate techniques to inspect, measure, adjust and check the serviceability of engine mechanical components
1.5	accurately measure engine components and compare with manufacturer's specification
1.6	correctly identify engine mechanical component defects
1.7	use safe working practices throughout the assessment
1.8	use a logical working procedure throughout the assessment
1.9	complete all documentation clearly and accurately
1.10	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	selection and use of PPE and VPE
2.2	how to select and use appropriate sources of technical information to inspect and check the serviceability of engine mechanical components
2.3	tools and equipment used to inspect, measure and check the serviceability of engine mechanical components
2.4	principles of operation to include: a. petrol engine mechanical systems b. diesel engine mechanical systems
2.5	how to accurately measure engine system components and compare with manufacturer's specification
2.6	how to correctly identify engine mechanical component defects and their causes of failure
2.7	safe working practices throughout the assessment
2.8	logical working procedures for the task
2.9	importance of completing all documentation clearly and accurately

Accreditation Module Title	Electrical System Fault Diagnosis

Module Code	AOM - 063

Practical Assessment Time	45 minutes

On-line Knowledge Test	K - 063

IMI AOM Level	3

Module Overview	

This module is to assess the technician's knowledge, skill and ability to diagnose a complex electrical fault, typically an open circuit, high resistance or a short circuit.

The technician will need to access vehicle information such as component location and appropriate electrical wiring diagrams and, use these together with electrical test equipment such as a multi-meter (volts, amps, ohms) to diagnose the system fault. The technician will also need have knowledge and understanding of network communication systems such as CAN, LIN, MOST & Fibre Optics. Once the electrical fault has been diagnosed, the technician should have the ability to rectify and check the system is functioning as per the vehicle manufacturer's specifications.

Technician Profile	

The technician should have successfully completed the service maintenance technician route prior to registration of the diagnostic technician accreditation or; have been be working in the light vehicle sector of the industry and have at least three years practical experience to ensure they are familiar with the skills, knowledge and techniques required to service and maintain vehicle systems to manufacturer specification including diagnosing vehicle system faults.

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Diagnostic Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	select and use appropriate Personal Protective Equipment (PPE) and Vehicle Protective Equipment (VPE)
1.2	select and use appropriate sources of technical information to diagnose faults in vehicle electrical systems and components including wiring diagrams and component locations
1.3	select and use the correct tools and equipment to diagnose faults in vehicle electrical systems and components
1.4	use appropriate techniques to diagnose and locate faults in vehicle electrical systems and components including: windscreen wipers, electric door mirror and heated rear window systems
1.5	correctly evaluate vehicle electrical faults from system testing and report their findings
1.6	use safe working practices throughout the assessment
1.7	use a logical working procedure throughout the assessment
1.8	complete all documentation clearly and accurately
1.9	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	selection and use of PPE and VPE
2.2	how to select and use appropriate sources of technical information when diagnosing faults in vehicle electrical systems and components including wiring diagrams and component locations
2.3	tools and equipment used to diagnose faults and make repairs to vehicle electrical systems and components
2.4	electrical and electronic principles including: a. ohms law, voltage, current flow, resistance and power b. inputs, electronic control and outputs c. network communication systems (CAN)
2.5	operation of vehicle electrical systems including: a. lighting and instrumentation systems b. engine starting and charging systems c. auxiliary electrical systems
2.6	maintenance associated with vehicle electrical systems
2.7	diagnostic techniques used to locate vehicle electrical faults
2.8	how to correctly identify vehicle electrical faults and their causes of failure
2.9	how to make appropriate repairs to vehicle electrical systems and components
2.10	safe working practices throughout the assessment
2.11	logical working procedures for the task
2.12	importance of completing all documentation clearly and accurately

Accreditation Module Title	Computer Based Test Equipment Fault Diagnosis

Module Code	AOM - 064

Practical Assessment Time	45 minutes

On-line Knowledge Test	K – 064

IMI AOM Level	3

Module Overview
This module is to determine that the technician is able to use computer based test equipment, such as fault code readers / scan tools, to diagnose vehicle system faults, typically those associated with engine management and anti-lock braking systems (ABS). The technician will be able to access the various vehicle systems, retrieve vehicle diagnostic information (e.g. fault codes / live data) and follow the prescribed method to diagnose the fault. The technician will be able to use applicable vehicle information and wiring diagrams to locate components to carry out the necessary checks to determine the functionality of the component, the integrity of the wiring and associated components for accurate fault diagnosis. The technician will be required to ensure they follow all appropriate health and safety procedures and wear the necessary Personal Protection Equipment during the assessment.

Technician Profile
The technician should have successfully completed the service maintenance technician route prior to registration of the diagnostic technician accreditation or; have been be working in the light vehicle sector of the industry and have at least three years practical experience to ensure they are familiar with the skills, knowledge and techniques required to service and maintain vehicle systems to manufacturer specification including diagnosing vehicle system faults.

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Diagnostic Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	select and use appropriate Personal Protective Equipment (PPE) and Vehicle Protective Equipment (VPE)
1.2	select and use appropriate sources of technical information to diagnose faults in engine management and anti-lock braking systems (ABS)
1.3	select and use computer based test equipment to diagnose faults in engine management and ABS systems
1.4	select and use the correct tools and equipment to diagnose faults in engine management and ABS systems
1.5	use appropriate techniques to diagnose and locate faults in engine management and ABS systems
1.6	correctly evaluate engine management and ABS system faults from system testing and report their findings
1.7	use safe working practices throughout the assessment
1.8	use a logical working procedure throughout the assessment
1.9	complete all documentation clearly and accurately
1.10	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	selection and use of PPE and VPE
2.2	how to select and use appropriate sources of technical information when diagnosing faults in engine management and ABS systems
2.3	how to select and use computer based test equipment when diagnosing faults in engine management and ABS systems
2.4	how to select and use tools and equipment used when diagnosing faults in engine management and ABS systems including multimeters and oscilloscopes
2.5	the operation of computer based testing equipment including: connecting to the vehicle and establishing correct communication, accessing and deleting fault codes, control of actuators and adjustments available, extinguishing service and fault code lamps and, vehicle software updates to vehicle control units
2.6	how to evaluate vehicle electrical and electronic systems using computer based and electrical testing equipment
2.7	how to make suitable repairs to electrical and electronic vehicle systems
2.8	how to update vehicle electronic operating systems using computer based testing equipment
2.9	safe working practices throughout the assessment
2.10	logical working procedures for the task
2.11	importance of completing all documentation clearly and accurately

Accreditation Module Title	Vehicle Safety Restraint Systems

Module Code	AOM - 065

Practical Assessment Time	45 minutes

On-line Knowledge Test	K – 065

IMI AOM Level	3

Module Overview	

This module is to determine that the technician is able to use computer based test equipment, such as fault code readers / scan tools, to diagnose vehicle safety restraint system faults.

The technician will be able to access various vehicle systems, retrieve vehicle diagnostic information (e.g. fault codes / live data) and follow the prescribed method to diagnose the fault. The technician will be able to use applicable vehicle information to locate components to carry out the necessary checks to determine the functionality of the component, the integrity of the wiring and associated components and allow the technician to accurately diagnose the vehicle fault.

The technician will be required to ensure that they follow all appropriate health and safety procedures and wear the necessary Personal Protection Equipment during the assessment.

Technician Profile	

The technician should have successfully completed the service maintenance technician route prior to registration of the diagnostic technician accreditation or; have been been working in the light vehicle sector of the industry and have at least three years practical experience to ensure they are familiar with the skills, knowledge and techniques required to service and maintain vehicle systems to manufacturer specification including diagnosing vehicle system faults.

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	IMI Accreditation Level
Light Vehicle Maintenance and Repair	Diagnostic Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	select and use appropriate Personal Protective Equipment (PPE) and Vehicle Protective Equipment (VPE)
1.2	select and use appropriate sources of technical information to diagnose faults in vehicle safety restraint systems (SRS)
1.3	select and use the correct tools and equipment to diagnose faults in vehicle SRS systems
1.4	use appropriate techniques to diagnose and locate faults in vehicle SRS systems
1.5	correctly evaluate SRS system faults from system testing and report their findings
1.6	use safe working practices throughout the assessment
1.7	use a logical working procedure throughout the assessment
1.8	complete all documentation clearly and accurately
1.9	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	selection and use of PPE and VPE
2.2	how to select and use appropriate sources of technical information when diagnosing faults in SRS systems
2.3	how to select and use appropriate tools and equipment used when diagnosing faults in SRS systems
2.4	the operation of vehicle SRS systems and components including: driver, passenger and side protection air bags, seat belt pre-tensioners, vehicle wiring, sensors and actuators
2.5	how to diagnose faults in vehicle SRS systems and components
2.6	how to evaluate testing of vehicle SRS system and components
2.7	how to make suitable repairs to vehicle SRS systems and components
2.8	safe working practices throughout the assessment
2.9	logical working procedures for the task
2.10	importance of completing all documentation clearly and accurately

Accreditation Module Title	Electrical Systems - Complex

Module Code	AOM - 066

Practical Assessment Time	60 minutes

On-line Knowledge Test	K - 066

IMI AOM Level	4

Module Overview	

This module is to assess the technician's knowledge, skill and ability to diagnose a complex chassis electrical fault that is integrated within a vehicle network system.

The technician will need to access vehicle information such as component location and appropriate vehicle electrical wiring diagrams and use these together with electrical test equipment such as multi-meter and scan tools to diagnose the system fault. The technician must have knowledge and understanding of network communication systems such as CAN, LIN, MOST and Fibre Optics. Once the electrical fault has been diagnosed, the technician should have the ability to rectify the fault and check the system is functioning as per the vehicle manufacturer's specification.

Technician Profile	

The master technician should be working in the light vehicle sector of the industry and ideally have at least five years' experience to ensure they are familiar with the skills, knowledge and techniques required to diagnose system faults, rectify the faults including replacing components and return the vehicle systems to manufacturer specification.

They will also require the skills and ability to effectively communicate with internal staff (at all levels), customers and industry organisations to transfer both technical and non-technical information.

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Master Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	diagnose a vehicle electrical fault(s) accurately when the vehicle electrical system is integrated within a network communication system
1.2	use electrical test equipment (such as a multi-meter) to be able to test the vehicles electrical system
1.3	access the correct wiring diagram for the vehicle's electrical system(s)
1.4	understand and apply wiring diagram to the vehicle diagnosis
1.5	diagnose electrical circuit faults using at least three methods of electrical fault finding to locate either a high resistance, high current or short circuit which is linked to a vehicle communication network
1.6	use a vehicle wiring diagram during the stages of diagnosis and repair of the electrical fault
1.7	determine a logical path to be able to diagnose / rectify a vehicles electrical fault
1.8	select and use appropriate PPE during assessment
1.9	comply with all health and safety requirements relative to assessment
1.10	diagnose a vehicle electrical fault accurately and the process to be able rectify the fault within a given time period

Knowledge Requirements	
The technician must know and understand:	
2.1	the correct practices when working on Hybrid - EV including safe working
2.2	how vehicle electrical systems link and integrate with vehicle communication networks
2.3	electrical values i.e. Ohms, Amps, Volts
2.4	vehicle system diagnosis processes and procedures
2.5	oscilloscope and its usage in diagnosis of vehicle electrical systems
2.6	diagnosing of climate control systems

Accreditation Module Title	Electrical Systems (Diagnosis/Scan Tool Diagnosis)

Module Code	AOM - 067

Practical Assessment Time	60 minutes

On-line Knowledge Test	K - 067

IMI AOM Level	4

Module Overview
This module is to assess the technician's knowledge, skill and ability to diagnose a complex driveline fault (i.e. engine management / transmission) that is integrated within a vehicle network system. The technician will need to access vehicle information, such as component location and appropriate vehicle electrical wiring diagrams, and use these together with electrical test equipment such as multi-meter and scan tools to diagnose the system fault. This will include analysing the vehicle data as the self-diagnosis information available will not guide the technician to the fault through prescribed procedures. The technician must have knowledge and understanding of network communication systems such as CAN, LIN, MOST and Fibre Optics. Once the electrical fault has been diagnosed, the technician should have the ability to rectify and then check the system is functioning as per the vehicle manufacturer's original specification.

Technician Profile
The master technician should be working in the light vehicle sector of the industry and ideally have at least five years' experience to ensure they are familiar with the skills, knowledge and techniques required to diagnose system faults, rectify the faults including replacing components and return the vehicle systems to manufacturer specification. They will also require the skills and ability to effectively communicate with internal staff (at all levels), customers and industry organisations' to transfer both technical and non-technical information.

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Master Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	use a scan tool / diagnostic test equipment competently
1.2	connect the equipment into the vehicles system using the correct process
1.3	communicate with the vehicle system(s)
1.4	read and understand any diagnosis information including fault code(s) stored and live data held within the vehicles system(s)
1.5	show knowledge of system components and their functionality within a computer controlled electrical system
1.6	carryout the basic checking of components and connections to vehicle electrical systems
1.7	accurately diagnose vehicle fault either without prescribed procedures driven from a fault code and / or multiple fault codes
1.8	link all vehicle fault symptoms to derive a diagnosis procedure to correctly rectify a fault(s)
1.9	use other electrical test equipment than scan/diagnosis tools (such as a multi-meter and / or oscilloscope) to be able to test the vehicles electrical system when carrying out prescribed procedures
1.10	erase vehicle system fault codes and check the vehicle systems are functioning correctly post system fault diagnosis / rectification
1.11	use Personal Protection Equipment (PPE)
1.12	follow health and safety guidelines
1.13	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	diagnosing diesel fuel system(s) without the use of fault code(s) information
2.2	diagnosing petrol fuel system(s) without the use of fault code(s) information
2.3	diagnosing network communication system(s) (e.g. CAN) within a motor vehicle environment

Accreditation Module Title	Computer Based Test Equipment - Complex

Module Code	AOM - 068

Practical Assessment Time	60 minutes

On-line Knowledge Test	K - 068

IMI AOM Level	4

Module Overview	
This module is to assess the technician's knowledge, skill and ability to maintain diagnostic equipment and update both equipment and vehicle systems. The technician will need to use a vehicle scan tool with current software to allow the vehicle to be configured to the drivers / customer's requirements. It will be necessary for the technician to check the system(s) is functioning as per the vehicle manufacturer's original specification, and to the customer's requirements.	

Technician Profile	
The master technician should be working in the light vehicle sector of the industry and ideally have at least five years' experience to ensure they are familiar with the skills, knowledge and techniques required to diagnose system faults, rectify the faults including replacing components and return the vehicle systems to manufacturer specification. They will also require the skills and ability to effectively communicate with internal staff (at all levels), customers and industry organisations to transfer both technical and non-technical information.	

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Master Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	use a scan tool / diagnostic test equipment competently
1.2	connect the equipment into the vehicles system using the correct process
1.3	communicate with the vehicle system(s) using suitable vehicle test equipment
1.4	configure / reconfigure vehicle system(s) functionality to suit customers' requirements and carryout further checks to ensure that the revisions operate the appropriate systems correctly
1.5	use Personal Protection Equipment (PPE)
1.6	follow health and safety guidelines
1.7	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	Scan tool / diagnostic test equipment
2.2	Updating vehicle system(s) with current software
2.3	Health and safety
2.4	Configuration of vehicle system(s) functionality to suit customers' requirements

Accreditation Module Title	Instructional Support

Module Code	AOM - 069

Practical Assessment Time	60 minutes

On-line Knowledge Test	K - 069

IMI AOM Level	4

Module Overview	

This module is to ensure that the technician has the ability to train / mentor others (apprentices / technicians) in the workplace. This will require the technician to have a good knowledge of the subject, be able to simplify the subject matter and transfer their knowledge to a trainee.

The technician will be required to carry out a practical demonstration during the assessment. During the assessment the technician will be required to demonstrate their ability to use training aids and their relevance in the transfer of information.

The technician will need to demonstrate that the information has been transferred to the trainee.

The technician will be given sufficient time within the assessment to prepare for the instructional support task.

Technician Profile	

The master technician should be working in the light vehicle sector of the industry and ideally have at least five years' experience to ensure they are familiar with the skills, knowledge and techniques required to diagnose system faults, rectify the faults including replacing components and return the vehicle systems to manufacturer specification.

They will also require the skills and ability to effectively communicate with internal staff (at all levels), customers and industry organisations to transfer both technical and non-technical information.

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Master Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	select the appropriate training aids to provide the means to allow the required knowledge to be imparted to the learner
1.2	show the knowledge of subject throughout instructional support to be able to answer questions from the learner
1.3	transfer knowledge to learner
1.4	transfer the subject through actions / verbal communication
1.5	use instructional aids
1.6	ensure that the learner has gained knowledge of subject / knowledge being transferred
1.7	communicate clearly throughout the transfer of knowledge
1.8	use language and terminology that the learner understands
1.9	coach / mentor others
1.10	use Personal Protection Equipment (PPE)
1.11	follow health and safety guidelines
1.12	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	the transfer of information to others
2.2	use of the methods used to train / impart knowledge to others
2.3	assessing the ability of others in the workplace
2.4	the use of training aids
2.5	health and safety

Accreditation Module Title	Customer Liaison

Module Code	AOM - 070

Practical Assessment Time	60 minutes

On-line Knowledge Test	K - 070

IMI AOM Level	4

Module Overview	
This module is to ensure that the technician has the ability to communicate with customers at all levels. This will require the technician to initially qualify the customer's needs, have a good knowledge of the subject and be able to simplify the subject matter. The technician will be required to explain a complex repair / subject to a customer, who has limited technical knowledge.	

Technician Profile	
The master technician should be working in the light vehicle sector of the industry and ideally have at least five years' experience to ensure they are familiar with the skills, knowledge and techniques required to diagnose system faults, rectify the faults including replacing components and return the vehicle systems to manufacturer specification. They will also require the skills and ability to effectively communicate with internal staff (at all levels), customers and industry organisations to transfer both technical and non-technical information.	

Links with Accreditation Routes and Modules	
This module features in:	
IMI Accreditation Route	**IMI Accreditation Level**
Light Vehicle Maintenance and Repair	Master Technician

Skills Requirements	
The technician must demonstrate their skills and ability to:	
1.1	greet the customer without compromise
1.2	qualify the needs of the customer to be able to provide the service that they require
1.3	use simple non-technical jargon to qualify the customer's needs
1.4	use simple non-technical language to explain the solution to meet the customers' needs
1.5	use simple non-technical responses to questions asked by customer
1.6	use interpersonal & listening skills when communicating with a customer
1.7	communicate clearly and provide accurate information when dealing with customers
1.8	communicate with customer(s) using non-verbal language, including the use of accurate records / written format and the use of body language
1.9	use Personal Protection Equipment (PPE)
1.10	follow health and safety guidelines
1.11	work within given time constraints

Knowledge Requirements	
The technician must know and understand:	
2.1	questioning techniques
2.2	communication techniques
2.3	legislation
2.4	health and safety