Level 1 IMI Award in Automotive Maintenance SOW

Delivered at CRISP Vocational Provision (key stage 4)

Level 1 Automotive Maintenance – Aims of the scheme/units	• Introduce learners to the health and safety knowledge requirements when carrying out simple maintenance and repair tasks in the workplace. • Introduce learners to tools, equipment and consumable materials used in vehicle maintenance • Provide learners with the basic knowledge in how to identify and access the technical information required to complete maintenance and repair activities. • Introduce learners to the knowledge and skills essential for the safe working operations when manually lifting, moving loads and when using manual handling equipment. • Introduce learners to the principles of engine lubrication systems, components, and operation and maintenance. • Introduce learners to the principles of engine cooling system components and maintenance • Introduce learners to spark ignition system components and maintenance • Introduce learners to braking system components and maintenance • Introduce learners to wheel tyre construction and maintenance • Introduce learners to vehicle electrical circuits and maintenance
Differentiation (e.g. planned activities or support for individual learners according to their needs.)	Differentiation of the subject will depend on a number of factors, these factors include a learner's familiarity with a situation, its complexity and technical demand, as well as the ability to resolve an issue or complete a necessary activity independently. The level of demand will vary from a simple discussion or exchange about a familiar subject, through to an extended piece of writing that persuasively communicates information and ideas to a diverse audience. Activities and tasks will be presented to incorporate a number of different learning styles with writing support frames and individual activities when needed. • Additional practice tasks available • Extension tasks

	• Appropriate resources for those with; visual, hearing and mobility difficulties, such as overlays and coloured paper • Individual support • Content broken down into smaller steps • Activities designed to take into account learner's styles • Examples of written work, where appropriate, and necessary key points highlighted
Equality & Diversity (e.g. consideration given to gender stereotyping in a traditionally male or female based occupational area)	• All measures will be taken to embed equality and diversity and prevent discrimination as far as possible • Measures will be taken to meet all learner's needs regardless of age, gender or ethnicity • To make the environment safe, for all learners to progress • To make reasonable adjustments to accommodate learners with learning difficulties and disabilities • Learning materials will be checked for appropriate images and language • Inappropriate language/behaviour will be challenged • Celebrate the diversity of achievement • Specialist equipment will be made available • Display boards will reflect diversity
Learning Resources (e.g. resources which are used each week)	• White board and pens • PPE • Reference books and journals • Motor vehicle • Tools and equipment • Calculators when needed • Computers where available • Dictionaries and spelling aids
Organisational related issues (e.g. sign post to key skills, basic skills, other units or work placements)	Where possible, learners are encouraged and referred to access future courses at the institute. All lessons are linked to Literacy and Numeracy Curriculum, Key Skills and Functional Skills.

Sessions	Topic/Objective Content	Learners Will	Leaners Can	Resources	Assessment Criteria
1-2	Health and Safety in The Workplace: Introduction to tools/materials/PPE.	Know health and safety requirements and information used in the workplace.	• State their personal responsibilities for health and safety in the workplace. • Identify common hazards and risks when working in the workplace. • Identify the need to be aware of the actions of others in the working environment. • Locate the main Health & Safety information and notices provided in the workplace.	PPE H&S signs and notices Tools	L1AM01/1.1 L1AM01/1.2 L1AM01/1.3 L1AM01/1.4
2-4	Health and Safety in The Workplace: Introduction to tools/materials/PPE continued.	Know the safe manual handling techniques to be used in the workplace.	• State the safe manual handling practices and procedures. • Identify common manual handling equipment used in the workplace.	Worksheets Pens	L1AM01/2.1 L1AM01/2.2
4-6	Health and Safety in The Workplace: Portfolio building	Know the local legislation procedures associated with working in the workplace.	• Identify the main substances hazardous to health in the workplace. • State the appropriate methods to dispose of waste materials in the workplace.	Worksheets Pens Portfolio folders	L1AM01/3.1 L1AM01/3.2
6-8	Health and Safety in The Workplace:	Know about fire prevention and emergency procedures.	• Identify the three elements that produce a fire. • Identify different types of fire extinguisher and their uses.	Worksheets Pens Portfolio folders	L1AM01/4.1 L1AM01/4.2 L1AM01/4.3

	Portfolio building		• State the procedures to follow in an emergency and the evacuation of the premises.		
8-10	Health and Safety in The Workplace: Portfolio building	Be able to identify the main health and safety information, equipment and notices in the workplace.	• Identify the main health and safety information in the workplace. • Identify the main health and safety equipment in the workplace. • Identify the main health and safety notices in the workplace.	Worksheets Pens Portfolio folders	L1AM01/5.1 L1AM01/5.2 L1AM01/5.3
10-12	Tools, Equipment and consumable materials for Vehicle Maintenance Practical Portfolio Building	Know a range of tools used in vehicle maintenance.	• Identify a range of vehicle maintenance and repair tools and equipment. • Outline how to check vehicle tools and equipment prior to use • State how to use vehicle tools and equipment correctly	Worksheets Pens Manuals Computers with internet access Workshop Tools Vehicle lift	L1AM02/1.1 L1AM02/1.2 L1AM02/1.3
12-14	Tools, Equipment and consumable materials for Vehicle Maintenance Practical Portfolio Building	Know a range of consumable materials used in vehicle maintenance and repair	• Identify consumable materials used in vehicle maintenance and repair • Locate appropriate information relating to consumable materials used in maintenance and repair • State how to use consumable materials used in vehicle maintenance and repair	Worksheets Pens Manuals Computers with internet access Workshop Tools Vehicle lift	L1AM02/2.1 L1AM02/2.2 L1AM02/2.3
14-16	Tools, Equipment and consumable materials for Vehicle Maintenance Practical task demo	Be able to Select , check and use consumable materials for vehicle maintenance and repair.	• Demonstrate how to select and check vehicle maintenance and repair tools and equipment • Demonstrate how to use vehicle maintenance and repair tools and equipment	Manuals Motor vehicle Tools Jack PPE Camera	L1AM02/3.1 L1AM02/3.2

	Practical task practice Photo Diary	Photograph the practical task to evidence in their portfolio.			
16-18	Tools, Equipment and consumable materials for Vehicle Maintenance Practical Photo Diary	Be able to select and use consumable materials for vehicle maintenance and repair	• Select and use consumable materials to maintain and repair vehicles	Manuals Motor vehicle Tools Jack PPE Camera	L1AM02/4.1
18-20	Lubrication systems components and operation: Introduction to the oil system.	Know about engine lubrication systems	• Identify the main components used in engine lubrication systems • State the purpose of the main components used in engine lubrication systems	Worksheets Pens Portfolio folders Internet C	L1AM04/1.1 L1AM04/1.2
20-22	Lubrication systems components and operation: Portfolio building	Know how engine lubrication systems operate	• State the operating principles of engine lubrication systems including • Wet sump • Total loss systems	Worksheets Pens Portfolio folders Internet Computer	L1AM04/2.1
22-24	Lubrication systems components and operation: Practical Portfolio Photo diary	Know how to carry out routine maintenance to engine lubrication systems.	• State how to remove , inspect and replace engine lubrication system components	Worksheets Pens Portfolio folders Tools Vehicle	L1MV04/3.1
24-26	Lubrication systems components and operation:	Be able to carry out routine maintenance on engine lubrication systems	• Work safely during engine lubrication system maintenance	Manuals Motor vehicle PPE	L1AM04/4.1 L1AM04/4.2 L1AM04/4.3

	Practical demo Practical practice Practical task Photo diary		• Select the correct technical data , tools and equipment for routine maintenance of engine lubrication systems • Demonstrate the correct procedure for • *Changing oil and oil filter on an engine* • *Replacing a gasket or seal on an engine component* • *Checking an engine for leaks*	Tools Camera Oil Oil filter	
26-28	Engine cooling system components and maintenance Portfolio	Know about engine cooling systems	• Identify the main components used in engine liquid cooling and air-cooling systems • State the purpose of the main components used in engine liquid cooling and air cooling systems.	Internet Computer Portfolio Pens	L1AM05/1.1 L1AM05/1.2
28-30	Engine cooling system components and maintenance Portfolio	Know how engine cooling systems operate	• State the operating principles of engine liquid cooling and air cooling systems	Internet Computer Portfolio Pens	L1AM05/2.1
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32-34	Engine cooling system components and maintenance Practical Portfolio Photo diary	Know how to carry out routine maintenance to engine cooling systems	• State how to remove , inspect and replace engine cooling system components	Tools Vehicle Lift Camera Portfolio pens	L1AM05/3.1

34-36	Engine cooling system components and maintenance Practical Portfolio Photo diary	Be able to carry out routine maintenance on engine liquid cooling systems	• Demonstrate the correct procedures when • *Removing and refitting a radiator and thermostat and refilling the cooling system* • *Checking the condition of the coolant pump drive belts* • *Pressure testing the cooling system and checking for leaks*	Tools Vehicle Lift Camera Portfolio pens	L1AM05/4.1 L!AM05/4.2 L1AM05/4.3
36-38	Spark ignition system components and maintenance: Portfolio building	Know spark ignition systems and components	• Identify the main components used in spark ignition systems • State the purpose and function of the main components used in spark ignition systems	Internet Computer Portfolio Pens	L1AM06/1.1 L1AM06/1.2
38-40	Spark ignition system components and maintenance Portfolio	Know how spark ignition systems operate.	• State the operating principals of spark ignition systems.	Worksheets Pens Portfolio folders Internet Computer	L1AM06/2.1
40-42	Spark ignition system components and maintenance Practical Portfolio Photo diary	Know how to carry our routine maintenance to spark ignition systems	• State how to remove , inspect , test, adjust and replace spark ignition system components	Worksheets Pens Portfolio folders Workshop Vehicle Tools	L1MV06/3.1
42-44	Spark ignition system components and maintenance Practical	Be able to carry our routine maintenance on spark ignition systems	• Work safely during spark ignition system maintenance • Select and use the correct technical data , tools and equipment for spark ignition system maintenance	Worksheets Pens Portfolio folders Workshop Vehicle	L1MV06/4.1 L1MV06/4.2 L1MV06/4.3

	Portfolio Photo diary		• Demonstrate the correct procedures when • *Removing , checking , adjusting and replacing engine spark plugs* • *Checking the compression pressure of an engine* • *Checking the resistance of an ignition coil*	Tools	
44-46	Braking systems components and maintenance: Portfolio	Know braking systems and components.	• Identify the main components used in braking systems • State the purpose and function of the main components used in engine braking systems.	Internet Computer Portfolio Pens	L1MV12/1.1 L1MV12/1.2
46-48	Braking systems components and maintenance: Portfolio building	Know how braking systems operate.	• State the operating principles of braking systems	Worksheets Pens Portfolio folders Internet Computer	L1MV12/2.1
48-50	Braking systems components and maintenance: Practical demo Practical practice Practical task Photo Diary	Know how to carry out routine maintenance to braking systems	• State how to remove, inspect , test and replace braking system components	PPE Motor vehicle Tools Camera Portfolio	L1MV12/3.1
50-52	Braking systems components and maintenance: Practical demo Practical practice	Be able to carry out routine maintenance on braking systems	• Work safely during braking system maintenance • Select and use the correct technical data , tools and equipment for braking system maintenance	PPE Motor vehicle Tools Camera Tools Axle stands Trolley Jack	L1MV12/4.1 L1MV12/4.2 L1MV12/4.3

	Photo Diary Practical task		• Demonstrate the correct procedures with • *Removing and replacing brake pads* • *Removing and replacing break shoes* • *Removing air from hydraulic braking system*	Vehicle lift	
52-54	Wheel and tyre construction and maintenance Portfolio building	Know how wheels and tyres are constructed	• Identify the types of tyre used on common vehicles • Identify the construction of radial and cross ply tyres • Identify the types of wheel used on vehicles	Worksheets Pens Portfolio folders	L1AM13/1.1 L1AM13/1.2 L1AM13/1.3
54-56	Wheel and tyre construction and maintenance Portfolio Building	Know wheel and tyre terminology	• Give examples of the markings and terminology associated with vehicle wheels and tyres	Worksheets Pens Portfolio folders	L1MV13/2.1
56-58	Wheel and tyre construction and maintenance Practical demo Practical practice Photo Diary Practical task	Know how to carry out routine maintenance and replacement of wheels and tyres	• State how to remove , inspect and replace wheel and tyre components	PPE Motor vehicle Tools Camera Tools Axle stands Trolley Jack Vehicle lift	L1MV13/3.1
58-60	Wheel and tyre construction and maintenance Practical demo Practical practice Photo Diary	Be able to carry out routine maintenance on wheel and tyre systems	• Work safely during wheel and tyre system maintenance • Select and use the correct technical data , tools and equipment for wheel and tyre system maintenance	PPE Motor vehicle Tools Camera Tools Axle stands Trolley Jack	L1MV13/4.1 L1MV13/4.2 L1MV13/4.3

	Practical task		• Demonstrate the correct procedures when: • *Removing and replacing a wheel on a vehicle* • *Removing ,inspecting and replacing a tyre* • *Where appropriate , balancing a wheel and tyre assembly*	Vehicle lift	
60-62	Vehicle electrical circuits and components Portfolio Building	Know vehicle lighting circuits and components	• Identify the main electrical components used in vehicle lighting systems • State the purpose and function of the main electrical components used in vehicle lighting	Worksheets Pens Portfolio folders Computer Internet	L1AM15/1.1 L1AM15/1.2
62-64	Vehicle electrical circuits and components Portfolio Building Practical Demonstration	Know how vehicle lighting systems operate	• State the operating principles of vehicle lighting systems	Portfolio Pens Computer Internet	L1AM15/2.1
64-66	Vehicle electrical circuits and components Practical demo Practical practice Photo Diary Practical task	Know how to construct a simple vehicle lighting circuit	• State how to construct and test a simple vehicle lighting circuit	Tools Components Vehicle Test metre Computer Manual Internet	L1AM15/3.1
66-68	Vehicle electrical circuits and components	Be able to construct a simple vehicle lighting circuit	• Work safely during construction of a simple lighting circuit • Select and use the correct technical data , tools and equipment for	Multi metre Soldering iron Solder Manual	L1AM15/4.1 L1AM15/4.2 L1AM15/4.3 L1AM15/4.4

	Practical demo Practical practice Photo Diary Practical task		constructing a simple vehicle lighting circuit • Demonstrate the correct procedures to make a simple lighting circuit using an appropriate • *Battery* • *Cable* • *Switch* • *Fuse* • *Relay* • *Bulb* • Test the correct operation of a simple electrical lighting circuit using electrical equipment	Tools Components Ppe Camera Portfolio Work sheets Technical data	
68-70	All units	Preparation for Exam	• Revision sessions in preparation for exam	Portfolios Computers Internet	All assessment criteria
70-76	Completion of incomplete where required Practical and portfolio	All units	• Complete any outstanding work or marking points	All resources	All assessment criteria