

-SQA-SCOTTISH QUALIFICATIONS AUTHORITY

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NATIONAL CERTIFICATE MODULE DESCRIPTOR

-Module Number- 0094372 -Session-1989-90
-Superclass- XS

**-Title- USE AND CARE OF WORKSHOP EQUIPMENT IN
MOTOR VEHICLE ENGINEERING (x¹/₂)**

-DESCRIPTION-

Purpose This module is designed to develop a basic knowledge of a range of equipment used in motor vehicle engineering and the skills associated with their use.

It is aimed at those intending to pursue a career in the motor vehicle repair industry. The module is also designed to complement RTITB module MV014F Light and Heavy Vehicle, Repair and Maintenance Skills and will provide the student with the necessary knowledge and skills to prepare for the RTITB Skills Test. It should be noted however that adequate supporting industrial experience will also be necessary.

Preferred Entry Level No formal entry requirements

Learning Outcomes The student should:

1. identify a range of motor vehicle workshop equipment;
2. select and use a range of workshop equipment effectively;
3. identify maintenance requirements of a range of workshop equipment.

Content/ Context	<p>Safety regulations, safe working practices and procedures should be observed at all times.</p> <p><u>Corresponding to Learning Outcomes 1-3:</u></p> <p>This module should be taught in the context most suited to the student's particular needs.</p> <p>The content should be limited to basic maintenance and safety checks required to maintain workshop equipment in a safe operational condition. Students should be made aware of operational and legal constraints applicable to certain workshop equipment e.g. grinders, fork lift trucks, shot blast equipment, etc. The students should also be aware of their responsibilities within the Health and Safety at Work Act.</p>
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Suggested Learning and Teaching Approaches	<p>This module should be taught in a workshop environment. Students should be allowed access to workshop equipment manuals and service data where applicable to determine safety checks and maintenance procedures. For the purpose of identification and illustration of faults and use of equipment, suitable photographs, diagrams, videos, wallcharts, etc. may be used.</p>
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Assessment Procedures	<p>Acceptable performance in the module will be satisfactory achievement of all the performance criteria specified for each Learning Outcome.</p> <p>The following abbreviations are used below:</p> <p>LO Learning Outcome IA Instrument of Assessment PC Performance Criteria</p>
LO1	<p>IDENTIFY A RANGE OF MOTOR VEHICLE WORKSHOP EQUIPMENT</p> <p>PC The student:</p> <p>(a) identifies workshop equipment by name; (b) states the purposes for which each item of equipment is used; (c) indicates the power source for given equipment.</p>

IA Short answer Questions

The student will be presented with short answer questions to test the recall of knowledge related to motor vehicle workshop equipment.

The test will consist of 25 questions allocated as follows:

- (a) identification 11
- (b) purpose 11
- (c) power source 3

The questions should include one example from each of the following categories of equipment.

1. compressor and air lines
2. vehicle hoists
3. cranes and lifting tackle
4. hydraulic, trolley, bottle and transmission Jacks
5. axle and chassis stands, blocks and ramps
6. greasing plant and guns
7. oil dispensers and drainers
8. component cleaning tanks
9. pullers
10. hydraulic presses
11. electrical leads and cables.

Satisfactory achievement of the Learning Outcome will be demonstrated by the student producing 8 correct responses for each of (a) and (b) above and identifying one example of an electrical, hydraulic or pneumatic power source.

LO2

SELECT AND USE A RANGE OF WORKSHOP EQUIPMENT EFFECTIVELY

PC The student:

- (a) identifies suitable equipment appropriate to given tasks;
- (b) checks function of equipment prior to use;
- (c) effectively uses a given range of workshop equipment;
- (d) follows all safety requirements relative to equipment and task.

IA Practical Exercise.

The student will be presented with a series of practical exercises to test the application of knowledge and skills involved in selecting and using a range of workshop equipment.

The exercises should involve the use of at least 5 items from the undernoted list:

1. compressor and air lines
2. vehicle hoists
3. cranes and lifting tackle
4. hydraulic, trolley, bottle and transmission jacks
5. axle and chassis stands, blocks and ramps
6. greasing plant and guns
7. oil dispensers and drainers
8. component cleaning tanks
9. pullers
10. hydraulic presses
11. electrical leads and cables

Satisfactory achievement of the Learning Outcome will be based on all performance criteria being met. A suitable checklist may be used to record student performance.

LO3

IDENTIFY MAINTENANCE REQUIREMENTS OF A RANGE OF WORKSHOP EQUIPMENT

PC The student:

- (a) identifies damaged or worn equipment;
- (b) states the nature of the damage found in the range of equipment;
- (c) states the dangers associated with using damaged or worn equipment;
- (d) states typical maintenance requirements for given equipment.

IA Objective Test

The student will be presented with an objective test to test the recall of knowledge related to the identification of maintenance requirements of a range of workshop equipment. The objective test could take the form of a matching exercise, short answer question or the completion of a pro forma sheet.

Photographs, diagrams, videos, actual equipment or any other suitable media may be used in the test.

The test will involve the maintenance requirements of at least 5 of the items from the following list with 3 questions for each item.

1. compressor and air lines
2. vehicle hoists
3. cranes and lifting tackle
4. hydraulic, trolley, bottle and transmission jacks
5. axle and chassis stands, blocks and ramps
6. greasing plant and guns
7. oil dispensers and drainers

8. component cleaning tanks
9. pullers
10. hydraulic presses
11. electrical leads and cables

Satisfactory achievement of the Learning Outcome will be demonstrated by the student producing at least 12 correct responses for the 15 questions.

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