

**-SQA-SCOTTISH QUALIFICATIONS AUTHORITY**

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**NATIONAL CERTIFICATE MODULE DESCRIPTOR**

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**-Module Number- 0094371 -Session- 1989-90**  
**-Superclass- XS**

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**-Title- USE AND CARE OF HAND TOOLS IN MOTOR VEHICLE  
ENGINEERING (x<sup>1</sup>/<sub>2</sub>)**

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**-DESCRIPTION-**

**Purpose** This module is designed to develop a basic knowledge of a range of hand tools 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.

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**Preferred Entry Level** No formal entry requirements

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**Learning Outcomes** The student should:

1. identify hand tools used for a range of tasks in motor vehicle engineering;
2. identify the serviceability of a range of hand tools;
3. select and use hand tools effectively.

**Content/ Context** Safety regulations, safe working practices and procedures should be observed at all times.

Corresponding to Learning Outcomes 1-3:

This module should be taught in the context most suited to the student's particular needs.

The students should be made aware of the wide range of hand tools available, the importance of maintaining tools in serviceable condition and of correct use of tools.

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Suggested Learning and Teaching Approaches

This module should be taught in a workshop situation where students are given adequate opportunity to examine a range of commonly used hand tools. Examples of worn, damaged or unserviceable tools should be available. Films, photographs, etc. may be used to show examples of specialised tools e.g. hub puller, ball joint separators, impact screwdrivers. Students should be given ample opportunity to practice the correct use of hand tools.

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Assessment Procedures

Acceptable performance in the module will be satisfactory achievement of all the performance criteria specified for each Learning Outcome.

The following abbreviations are used below:

LO Learning Outcome  
 IA Instrument of Assessment  
 PC Performance Criteria

LO1

IDENTIFY HAND TOOLS USED FOR A RANGE OF TASKS IN MOTOR VEHICLE ENGINEERING

PC The student:

- (a) identifies hand tools by name;
- (b) states the purposes for which each tool is used.

IA Objective Test

The student will be presented with an objective test to test the recall of knowledge of identification of hand tools used for a range of tasks in motor vehicle engineering and their purposes.

The objective test could take the form of a matching exercise or short answer questions.

The test will involve the identification of the following categories of hand tools:

1. spanners
2. screwdrivers
3. pliers
4. hammers
5. bars and levers
6. sockets
7. chisels
8. pliers circlip

9. punches
10. drifts
11. torque wrenches
12. files

Satisfactory achievement of the Learning Outcome will be based on all performance criteria being met. This will be demonstrated by the student correctly identifying at least 1 tool from each of the above categories and stating the purpose of each one.

LO2

#### IDENTIFY THE SERVICEABILITY OF A RANGE OF HAND TOOLS

PC The student:

- (a) identifies damaged or worn tools from a given range;
- (b) states the nature of the damage found in the range of tools;
- (c) states the dangers associated with using damaged or worn tools.

IA Objective Test

The student will be presented with an objective test to test the recall of knowledge relating to the serviceability of a range of hand tools.

The objective test could take the form of a matching exercise, short answer questions or the completion of a pro forma sheet.

The test will involve the identification of damaged or worn tools from the following 12 categories.

1. spanners
2. screwdrivers
3. pliers
4. hammers
5. bars and levers
6. sockets
7. chisels
8. pliers circlips
9. punches
10. drifts
11. torque wrenches
12. files

The twelve examples given should include at least 8 worn/damaged tools and 4 serviceable tools.

Satisfactory achievement of the Learning Outcome will be based on all performance criteria being met for six examples of worn/damaged tools.

LO3

## SELECT AND USE HAND TOOLS EFFECTIVELY

PC The student:

- (a) selects appropriate hand tools in relation to type and size for a given task;
- (b) uses a range of appropriate hand tools effectively;
- (c) cleans and stores hand tools after use;
- (d) follows all safety practices relevant to the use of hand tools.

IA Practical Exercise

The student will be presented with a practical exercise to test the application of knowledge and skills involved in the selection and effective use of hand tools to undertake one specific task.

Examples of the type of task to be given to the student could include:

1. Tightening a cylinder head
2. Removing and replacing a spark plug
3. Tightening spring 'U' bolts
4. Removing and replacing a road wheel

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.