

-SQA- SCOTTISH QUALIFICATIONS AUTHORITY

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NATIONAL CERTIFICATE MODULE DESCRIPTOR

-Module Number-	2210651	-Session-1991-92
-Superclass-	XR	

-Title-	VEHICLE PAINTING PROCESSES: TOOLS, EQUIPMENT AND PROCEDURES
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-DESCRIPTION-

Purpose This module is designed to introduce the student to tools, equipment and procedures related to vehicle painting processes and to develop the necessary skills and knowledge required to use specified hand tools and equipment in a range of vehicle painting processes.

It is aimed at those intending to pursue a career in the motor vehicle repair industry. The module is also designed to complement RTITB foundation modules. This will provide the student with the necessary skills and knowledge to prepare for the RTITB Skills Test.

It is aimed at those following a programme of study in the motor vehicle repair industry and receiving complementary industrial experience.

Preferred Entry Level	No formal entry requirements.
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Outcomes	The student should: <ol style="list-style-type: none">1. identify tools and equipment related to vehicle painting processes;2. use specified hand tools and equipment in a range of vehicle painting processes;3. outline safe working practices for specified tools and equipment.
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Assessment Procedures	Acceptable performance in this module will be satisfactory achievement of all the Performance Criteria specified for each Outcome.
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The following abbreviations are used below:

PC Performance Criteria
IA Instrument of Assessment

Note: The Outcomes and PCs are mandatory and cannot be altered. The IA may be altered by arrangement with SQA. (Where a range of performance is indicated, this should be regarded as an extension of the PCs and is therefore mandatory.)

OUTCOME 1 IDENTIFY TOOLS AND EQUIPMENT RELATED TO VEHICLE PAINTING PROCESSES

- PCs
- (a) The naming of tools and equipment related to vehicle painting processes is correct.
 - (b) The identification of the function of tools and equipment related to vehicle painting processes is correct.

IA Objective Test

The student will be presented with an objective test to test the recall of knowledge relating to the identification of vehicle painting tools and equipment by name and function.

The test could take the form of a matching exercise. The exercise will consist of 15 items from the following list.

- (1) clipped putty knife;
- (2) broad putty knife;
- (3) plastic spreader;
- (4) rubbing block;
- (5) craft/utility knife;
- (6) masking equipment/machine;
- (7) spray gun cleaning machine;
- (8) spray booth;
- (9) stoving or baking oven;
- (10) paint mixing scheme;
- (11) portable infra-red heater;
- (12) portable shot/grit blaster;
- (13) steam cleaner;
- (14) disc sander;
- (15) dual action sander;
- (16) hand pot/paint kettle;
- (17) paint thickness measuring gauge;
- (18) portable disc grinder;
- (19) viscosity cup;
- (20) planishing hammer;
- (21) cross pein hammer;
- (22) ball pein hammer;
- (23) pick hammer;
- (24) panel beating dolly;

(25) flexible body file.

Satisfactory achievement of the Outcome will be based on all Performance Criteria being met. This will be demonstrated by the student identifying correctly at least 12 items, each by name and function, from the above list.

OUTCOME 2 USE SPECIFIED HAND TOOLS AND EQUIPMENT IN A RANGE OF VEHICLE PAINTING PROCESSES

- PCs
- (a) The painting of a panel with a brush ensures the finish is void of runs, sags, excessive brush marks and missed places.
 - (b) The removal of a minor dent from an unpainted panel using a panel hammer and dolly ensures that the metal is restored to its original contour.
 - (c) The use of a paint mixing scheme ensures the colour mixed matches the original sample from manufacturer's paint colour card.
 - (d) The removal of corrosion from a steel body panel with a portable shot/grit blaster ensures, upon visual inspection, that all corrosion products have been removed.
 - (e) The cleaning of a specified area of a vehicle using a steam cleaner ensures all contaminants are removed.
 - (f) The cleaning of vehicle ensures a high presentational standard to the customer.

IA Practical Exercise

The student will be presented with an exercise consisting of a series of practical tasks to test the application of knowledge and skills related to the use of specified hand tools and equipment in a range of vehicle painting processes.

The exercise will consist of a series of practical exercises corresponding to the above Performance Criteria.

Satisfactory achievement of the Outcome will be based on all Performance Criteria being met.

OUTCOME 3 OUTLINE SAFE WORKING PRACTICES FOR SPECIFIED TOOLS AND EQUIPMENT

- PCs
- (a) The identification of safe working practices to be followed when using hand tools is correct in terms of personal safety.
 - (b) The identification of safe working practices to be followed when using electrically and pneumatically powered tools is correct for a specified power tool.
 - (c) The identification of potential hazards associated with vehicle paint areas is comprehensive in respect of:

- (i) storage and handling of materials;
- (ii) vapours;
- (iii) flammability.

IA Objective Test

The student will be presented with an objective test to test the recall of knowledge relating to the safe working practices associated with the use of tools and equipment.

The test could take the form of short answer questions.

The test should consist of 22 items allocated as follows:

- (i) hand tools; - 4
- (ii) electrically powered tools; - 3
- (iii) pneumatically powered tools; - 3
- (iv) storage and handling; - 4
- (v) vapours; - 4
- (vi) flammability. - 4

Satisfactory achievement of the Outcome will be based on all Performance Criteria being met. This will be demonstrated by the student producing 16 correct responses as follows:

- (i) 3
- (ii) 2
- (iii) 2
- (iv) 3
- (v) 3
- (vi) 3

**The following sections of the descriptor are offered as guidance.
They are not mandatory.**

CONTENT/CONTEXT

Corresponding to Outcomes 1-3:

1. Identification of the functions and maintenance requirements of a range of tools and equipment commonly used in vehicle painting and related processes.
 2. Brush painting tools, equipment and procedures.

The use of a range of panel beating hand tools for a minor bodywork repair operation.

Location of a vehicle colour code and the use of a complete paint mixing scheme for subsequent mixing of a small quantity of the colour.

The use, function and maintenance requirements of basic portable shot/grit blasting tools/equipment related to a vehicle body panel operation.

Use, function and maintenance of vehicle tools and equipment for cleaning a vehicle which has undergone a vehicle repair in a garage workshop situation.
 3. Identification of safe working practices when working with tools and equipment, with reference to current COSHH (Control of Substances Hazardous to Health) regulations.
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SUGGESTED LEARNING AND TEACHING APPROACHES

The practical content of this module should be undertaken in a workshop environment with access to the tools and equipment to be covered.

A suitable checklist should be used to record the student's performance in the practical exercise.

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09/02/98 JH/CD