

**-SQA- SCOTTISH QUALIFICATIONS AUTHORITY**

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**NATIONAL CERTIFICATE MODULE DESCRIPTOR**

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<b>-Module Number-</b>	<b>2210102</b>	<b>-Session-1992-93</b>
<b>-Superclass-</b>	<b>QH</b>	

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<b>-Title-</b>	<b>VEHICLE SECURITY SYSTEMS (X<sup>1</sup>/<sub>2</sub>)</b>
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**-DESCRIPTION-**

Purpose	This half module is designed for persons employed in the servicing and repair of Light and Heavy Road Vehicles or in the fitting and repair of specialist Vehicle Security Systems.
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Preferred Entry Level	2210091	Introduction to Vehicle Electrical/ Electronic Principles: Testing and Measurement
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Outcomes	The candidate should: <ol style="list-style-type: none"><li>1. outline the function of passive vehicle security devices;</li><li>2. outline the function of the main components of an active vehicle security system;</li><li>3. install active vehicle security system components;</li><li>4. assess the condition of an active vehicle security system.</li></ol>
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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                    OUTLINE THE FUNCTION OF PASSIVE VEHICLE SECURITY DEVICES**

- PCs                    (a)    The identification of the location of the device is correct.
- (b)    The identification of the function of the device is correct in terms of operation.

IA    Objective Test

The candidate will be presented with an objective test to assess the application of knowledge and skills required to locate, identify, and state the function of, the device.

The test will take the form of short answer and completion items applied to 2 Passive Security Devices from the following list:

doors deadlock mechanisms;  
window locking mechanisms;  
window etching;  
radio coding.

For each of the devices allocated from the above list, the candidate must complete answers which clearly identify:

- (i)    the location of the device;  
(ii)   the function of the device.

Satisfactory achievement of the Outcome will be based on all Performance Criteria being met. This will be demonstrated by the candidate producing correct responses to (i) and (ii) for each of the devices included in the assessment.

**OUTCOME 2                    OUTLINE THE FUNCTION OF THE MAIN COMPONENTS OF AN ACTIVE VEHICLE SECURITY SYSTEM**

- PCS                    (a)    The identification of the location of the main components is correct for a specified system.
- (b)    The identification of the function of the main components is correct for a specified system.

**IA Objective Test**

The candidate will be presented with an objective test to assess the application of knowledge and skills required to locate, identify, and state the function of, the components.

The test will take the form of short answer and completion items applied to 5 Active Security Systems selected from the following list:

engine ignition isolators;  
 engine fuel isolators;  
 passive infra-red (PIR) detectors;  
 vehicle motion detectors;  
 vehicle location transmitters;  
 battery discharge detectors;  
 pressure detectors.

For each of the systems allocated from the above list, the candidate must complete answers which clearly identify:

- (i) the location of the main components;
- (ii) the function of each of the main components.

Satisfactory achievement of the Outcome will be based on all Performance Criteria being met. This will be demonstrated by the candidate producing correct responses to (i) and (ii) for each of the systems included in the assessment.

**OUTCOME 3****INSTALL ACTIVE VEHICLE SECURITY SYSTEM COMPONENTS**

PCs

- (a) The installation of the components is carried out in accordance with the manufacturer's instructions.
- (b) The fitting of ancillary wiring is secure and free from possible damage.
- (c) Working methods followed are in accordance with current safety requirements.
- (d) Use of tools is appropriate to the task.
- (e) The operation of the system complies with all legal requirements for vehicle security audible warnings.

**IA Practical Exercise**

The candidate will be presented with a Practical Exercise to test the application of skills and knowledge to the fitting of components for 1 active vehicle security system selected from the list in the assessment for Outcome 2.

The systems allocated will reflect the type of vehicles the candidate deals with in the workplace.

Satisfactory achievement of the Outcome will be based on all Performance Criteria being met. This will be demonstrated by the candidate producing 2 systems correctly installed in accordance with the manufacturer's instructions.

**OUTCOME 4                    ASSESS THE CONDITION OF AN ACTIVE VEHICLE SECURITY SYSTEM**

- PCs
- (a) The procedures followed to identify the existence of a fault are in accordance with the manufacturers' instructions.
  - (b) The procedures followed to locate a faulty component are in accordance with the manufacturers' instructions.
  - (c) The use of test equipment is in accordance with the manufacturers' instructions.
  - (d) The recording of test readings is sufficiently accurate to enable the readings to be accurately compared with the manufacturer's test specifications.
  - (e) The identification of the cause of the fault is appropriate to the test diagnosis and the state of the vehicle.
  - (f) The identification of rectification work required from the test diagnosis is in accordance with the manufacturer's repair procedures.

**IA      Practical Exercise**

The candidate will be presented with a Practical Exercise to test the application of skills and knowledge to the assessment of the condition of 2 active vehicle security systems selected from the list in the assessment for Outcome 2.

The systems allocated will reflect the type of vehicles the candidate deals with in the workplace.

Satisfactory achievement of the Outcome will be based on all Performance Criteria being met. This will be demonstrated by the candidate correctly assessing the condition of 2 active vehicle security systems and recommending appropriate remedial action for all defects.

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

### CONTENT/CONTEXT

Safety regulations and safe working practices must be emphasised at all times, including the risk of damage to electrical and electronic components by incorrect polarity, overloading and high temperatures.

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### SUGGESTED LEARNING AND TEACHING APPROACHES

All Outcomes should be taught in a workshop environment with access to a range of up-to-date vehicle security systems, components, test equipment and manufacturer's technical publications.

The selection of practical exercises should reflect the types of vehicle the candidate will most commonly deal with at work.

The requirements of any Industry Body such as the RTITB Transkill Scheme should be investigated for inclusion and assessment in the module.

Where this module is being taught to students who only specialise in the fitting of vehicle security systems, some preparatory work on vehicle electrics may be necessary.

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