

-SQA- SCOTTISH QUALIFICATIONS AUTHORITY

**Hanover House
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NATIONAL CERTIFICATE MODULE DESCRIPTOR

-Module Number-	2210591	-Session-1991-92
-Superclass-	XS	

-Title-	LIGHT VEHICLE BODY EXTERIOR AND COMPONENTS: FAULT DIAGNOSIS AND CONDITION ASSESSMENT
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-DESCRIPTION-

Purpose This module is designed to develop the skills and knowledge required to carry out fault diagnosis procedures and assess bodywork condition.

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 LV402C Vehicle Body Exterior: Condition Assessment and Fault Diagnosis and will provide the student with the necessary knowledge and skills to prepare for the RTITB skills test.

It should be noted that adequate supporting industrial experience will also be necessary.

Preferred Entry Level	Module Number 2210581 Light Vehicle Body Exterior Components and Finish Trim: Removal, Replacement and Adjustment.
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Outcomes	The student should: <ol style="list-style-type: none">1. outline diagnostic procedures for locating bodywork faults;2. carry out fault diagnosis procedures for bodywork faults;3. assess body and body component condition.
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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 DIAGNOSTIC PROCEDURES FOR LOCATING BODYWORK FAULTS

PCs

- (a) The description of the procedures for locating causes of water ingress indicates a systematic approach.
- (b) The description of the procedures for locating causes of wind noise indicates a systematic approach.
- (c) The description of procedures for locating causes of mechanical noise indicates a systematic approach.
- (d) The description of procedures for locating causes of improper operation of door adjustable components indicates a systematic approach.

IA Objective Test

The student will be presented with an objective to test the recall of knowledge relating to diagnostic procedures for locating bodywork faults.

The objective test could take the form of restricted response questions.

The test will consist of 4 questions based on the Performance Criteria and allocated as follows:

- (a) ingress of water into the vehicle interior (excluding car heater);
- (b) wind noise from maladjusted, defective or "add-on" body fittings.
- (c) mechanical noise from improperly secured body fittings;
- (d) improper operation of door, door lock and window regulator.

Satisfactory achievement of the Outcome will be based on all Performance Criteria being met. This will be demonstrated by the student producing 4 correct responses.

OUTCOME 2 CARRY OUT FAULT DIAGNOSIS PROCEDURES FOR BODYWORK FAULTS

- PCs
- (a) The procedures followed to locate the cause of water ingress into a vehicle are consistent with systematic diagnostic procedures.
 - (b) The procedures followed to locate the cause of vehicle wind noise are consistent with systematic diagnostic procedures.
 - (c) The procedures followed to locate the cause of body mechanical noise are consistent with systematic diagnostic procedures.
 - (d) The procedures followed to locate the cause of improper operation of adjustable door components are consistent with systematic diagnostic procedures.

IA Practical Exercise

The student will be presented with a practical exercise to test the application of knowledge and skills relating to carrying out diagnostic procedures for locating bodywork faults.

The practical exercise will consist of the student following a series of fault diagnosis procedures on vehicle(s) to locate one cause for each of the following:

- (i) ingress of water to passenger or boot compartments;
- (ii) wind noise created by failure to provide an air-tight passenger compartment;
- (iii) mechanical noise created by failure to provide secure and vibration free body fittings;
- (iv) improper operation of door, door lock and window regulator.

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

OUTCOME 3 ASSESS BODY AND BODY COMPONENT CONDITION

- PCs
- (a) The description of the condition of underbody protection is comprehensive in terms of adequate cover, adhesion and effectiveness.
 - (b) The assessment of the effects of corrosion evidence is comprehensive in terms of weakened structure, component life and visual aspect.
 - (c) The evaluation of body and body component condition following visual inspection ensures defects are highlighted.

IA Assignment

The student will be presented with an assignment to test the recall of knowledge and skills relating to the assessment of body and body component condition.

The student will be required to carry out an inspection of a vehicle or vehicles with body defects and report on the following:

- (i) condition of underbody protective coating;
- (ii) corrosion evidence;
- (iii) body and body component condition.

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

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

CONTENT/CONTEXT

Safety regulations, safe working practices and procedures should be observed at all times.

Corresponding to Outcomes 1-3:

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

This module is intended to give students an insight into the procedures for body and body component fault diagnosis.

The student should be made particularly aware of the principles of fault diagnosis procedures in order to derive competent work practices.

The effects of corrosion on body structure and component life may be assessed against the MOT Test standard.

SUGGESTED LEARNING AND TEACHING APPROACHES

This module should be undertaken in a service workshop with an adequate range of vehicles and equipment for bodywork fault diagnosis. Students should have access to relevant service publications for the satisfactory performance of each task.

A checklist should be used to record the progression and completion of each practical exercise.

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