

**-SQA-SCOTTISH QUALIFICATIONS AUTHORITY**

**Hanover House  
24 Douglas Street  
GLASGOW G2 7NG**

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**NATIONAL CERTIFICATE MODULE DESCRIPTOR**

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**-Module Number- 0074506 -Session-1987-88**  
**-Superclass- XR**

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**-Title- VEHICLE BODY BUILDING: COMMERCIAL VEHICLE UNDERFRAMES**

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**-DESCRIPTION-**

Type and Purpose A specialist module which develops the knowledge and skills for the construction and mounting of commercial vehicle body underframes and platforms.

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Preferred Entry Level 64730 Fastening and Joining: Non-Thermal Methods (1/2)  
64050 Introduction to Materials (1/2)  
64721 Material Preparation and Forming Processes  
64703 Engineering Manufacturing Processes 1  
64061 Materials: Protection and Failure Prevention (1/2)  
65301 Carpentry and Joinery: Workshop Practice  
74505 Vehicle Body Building 1: Introduction

Learning The student should:

1. know the requirements of chassis frames and the principles of body mounting;
2. know and apply the principles of commercial vehicle body underframe design;
3. use appropriate construction and mounting methods for commercial vehicle body underframes.

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> <ol style="list-style-type: none"> <li>1. Need for separate chassis on C.V.S. types of chassis frame construction general points of chassis frame design. Principles of body mounting for C.V's preferred mounting principles for a range of C.V. bodies. <ul style="list-style-type: none"> <li>Principles and applications of flexible mounting.</li> </ul> </li> <li>2. Factors affecting choice of underframe matt. <ul style="list-style-type: none"> <li>Selection procedures for suitable underframe matt.</li> <li>Factors affecting design of underframe.</li> <li>Available sections for underframe construction.</li> <li>Practical activity on underframe layout.</li> </ul> </li> <li>3. Order of assembly of underframe components selection of fixings. <ul style="list-style-type: none"> <li>Required dimensional tolerances use of assembled aids.</li> <li>Marking out of underframe components selection of correct assembly techniques.</li> <li>Selection of correct assembly techniques.</li> <li>Selection of correct mounting techniques.</li> </ul> </li> </ol>
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Suggested Learning and Teaching Approaches	<p>The lecturer should demonstrate the procedure and working methods used to achieve each learning outcome. This should be followed by student practical assignments on scale units if working space is restricted.</p> <p>Lectures/demonstrations should relate practical application and theory.</p> <p>A practical activity should involve the marking of cross bar spacing on a layout board.</p> <p>Lectures/demonstrations should identify the components of a platform body, the purpose of each component and their importance to the bodies strength.</p>
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Assessment  
Procedures

Acceptable performance in the module will be satisfactory achievement of 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 IA Written assignment on the requirements of chassis frames and the principles of body mounting.

PC The student:

(a) describes the main types of chassis frame designs;

(b) identifies suitable mounting methods for one bracket type and one alternative type of commercial vehicle body.

LO2 IA (1)Written assignment on the principles of commercial vehicle body underframe design.

PC The student:

(a) identifies selection procedures for underframe constructional materials;

(b) identifies the main design criteria for commercial vehicle body underframes.

IA (2)Practical exercise used with an observation checklist in which the student completes a cross-bearer spacing exercise.

PC The student.

(a) completes the cross-bearer exercise to the tolerance laid down by the chassis manufacturer.

(b) submits a cutting list of underframe components to an agreed standard;

(c) observes all safety regulations;

(d) uses safety clothing, tools and equipment.

LO3 IA Practical exercise in which the student constructs a section of a vehicle body underframe which includes main structural members, one mounting point, 2 corner joints, 2 tee joints and 2 different methods of fastening.

PC The student:

- (a) uses the correct method of underframe construction;
- (b) correctly mounts the section on a representation of a chassis;
- (c) correctly aligns the section;
- (d) observes all safety regulations;
- (e) uses all safety clothing, tools and equipment.