



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **AUM5301B Produce drawings manually**

**Revision Number: 1**

## AUM5301B Produce drawings manually

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the application of the required skills and knowledge to produce drawings, using manual drafting techniques, required in the design, development and production of bus/truck/trailers.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>The unit applies to the automotive and related component manufacturing environment and involves application of skills and knowledge to be used within the scope of the person's job and authority.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		
	Nil	Nil
	Nil	Nil

## Employability Skills Information

<b>Employability skills</b>	This unit contains Employability Skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Clarify manual drafting requirements	<p>1.1. Project objectives for the design brief or problem are clarified and defined in accordance with <b><i>organisation requirements</i></b></p> <p>1.2. <b><i>Relevant parameters</i></b> are identified and interpreted</p> <p>1.3. Drafting requirements and processes are clarified based on consideration of project objectives and identified parameters</p>
2. Select tools, equipment and media	<p>2.1. Required tools, equipment and media for the manual drafting project are selected from appropriate <b><i>resources</i></b></p>
3. Make any required measurements	<p>3.1. Any measurements of components, sub-assemblies, products, models, equipment, layouts or facilities needed for the preparation of the required drawings are made and recorded</p>
4. Prepare and check drawings	<p>4.1. Critical dimensions and data for the required drawing are established</p> <p>4.2. As required, preliminary sketches are prepared and reviewed with <b><i>appropriate personnel</i></b></p> <p>4.3. Drawings are prepared in accordance with project objectives, specifications and standards</p> <p>4.4. Drawings are checked against project objectives, specifications and organisation standards, and any necessary changes made</p>
5. Document and store drawings	<p>5.1. Drawings and associated technical information are documented in accordance with project requirements and organisation procedures</p> <p>5.2. The drawings and associated documentation are processed for approval</p> <p>5.3. Drawings and associated documentation are stored in accordance with organisation procedures</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

#### Required skills

- speak clearly and directly in order to review drawings with appropriate personnel
- apply teamwork to a range of situations, including the preparation of drawings
- solve problems particularly in teams in order to meet performance indicators
- show initiative in adapting to changing work conditions or contexts particularly when working across a variety of work areas
- access, interpret and apply information on relevant organisation policies, procedures and instructions, particularly to ensure drawings are documented and stored in accordance with organisation procedures and project requirements
- manage time when planning, preparing and organising work priorities
- take responsibility for organising own work priorities.

#### Required knowledge

- relevant Occupational Health and Safety and Environmental regulations and organisation policies and procedures needed to carry out work in a manner which ensures the safety of people, equipment and the environment.
- organisation technical work documentation covering procedures, specifications, schedules and work plans
- organisation cost minimisation/waste avoidance policies, procedures and practices
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution techniques
- processes to clarify manual drafting requirements
- processes to select tools, equipment and media
- processes to make required measurements
- processes to check drawings
- processes to document drawings
- processes to store drawings.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- compliance with relevant legislative, regulations, standards, codes of practice and establish safe practices and organisation policies and procedures for managing personal work priorities
- maintaining a working knowledge of current work systems and practices
- working and communicating effectively and positively with others involved in the work
- applying, within authority, the requirements of the job or work role in relation to:
  - achieving production goals
  - achieving work quality goals
  - responding positively to changing work requirements
- contributing effectively to cost reduction initiatives
- effectively applying problem solving techniques
- modify activities to cater for variations in organisation context and environment
- clarify manual drafting requirements
- select tools, equipment and media
- make any required measurements
- prepare drawings manually
- check drawings
- document drawings
- store drawings - paper based / electronic.

#### Context of and specific resources for assessment

- assessment of the competency should take place in a safe working environment in a passenger motor vehicle manufacturing plant or simulated environment using tools/equipment/machinery required for the production process without undue disruption to the production process
- assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints.

**EVIDENCE GUIDE****Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- assessment methods must confirm consistency and accuracy of performance (over time and in a range of organisation relevant contexts) together with application of underpinning knowledge
- assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- assessment may be applied under project related conditions (real or simulated) and require evidence of process
- assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

<p><b><i>Organisation requirements</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• access and equity principles and practices</li> <li>• environmental management (waste disposal, recycling and re-use guidelines)</li> <li>• emergency and evacuation procedures</li> <li>• equipment use procedures</li> <li>• ethical standards</li> <li>• legal obligations</li> <li>• maintenance and storage procedures</li> <li>• OHS requirements</li> <li>• organisational and site guidelines</li> <li>• policies and procedures relating to own role and responsibility</li> <li>• procedural manuals</li> <li>• quality assurance guidelines</li> <li>• quality and continuous improvement processes and standards</li> <li>• recording and reporting guidelines.</li> </ul>
<p><b><i>Relevant parameters</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• functional specifications</li> <li>• quality targets</li> <li>• materials</li> <li>• ergonomic considerations</li> <li>• documented standards</li> <li>• technical information</li> <li>• cost constraints</li> <li>• manufacturing processes.</li> </ul>
<p><b><i>Resources</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• type of product or sub-assembly to be designed</li> <li>• design brief and associated design parameters (eg materials, cost constraints, processes to be used, quality requirements)</li> <li>• documentation and reporting systems</li> <li>• occupational health and safety standards</li> <li>• drawing equipment</li> </ul>



RANGE STATEMENT	
	<ul style="list-style-type: none"><li>• access to professional staff</li><li>• qualified workplace assessors</li><li>• workplace or simulated workplace.</li></ul>
<i>Appropriate personnel</i> may include:	<ul style="list-style-type: none"><li>• clients and managers</li><li>• supervisors</li><li>• suppliers</li><li>• team leaders</li><li>• team members.</li></ul>

## Unit Sector(s)

Unit sector	Automotive Manufacturing
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## Competency field

Competency field	Truck/Bus/Trailer Manufacture and Assembly
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## Co-requisite units

Co-requisite units		
	Nil	Nil
	Nil	Nil