



**Australian Government**

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

# **AUM4011A Manufacture or modify plant, tooling, equipment or systems**

**Revision Number: 1**

## AUM4011A Manufacture or modify plant, tooling, equipment or systems

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the application of the required skills and knowledge to manufacture or modify plant, tooling, equipment or systems required for the design, development and production of motor vehicles.</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
<p>1. Plan manufacture or modification of plant, tooling, equipment or systems</p>	<p>1.1. Applicable <b><i>OHS</i></b> and <b><i>organisation requirements</i></b> relevant to the manufacture or modification of plant, tooling, equipment or systems are verified and complied with throughout the work activity</p> <p>1.2. <b><i>Instructions</i></b> and plans are read and interpreted to identify processes and materials to complete work tasks</p> <p>1.3. Requirements of the client for manufacture of, or modification to plant, tooling, equipment and/or systems are assessed/re-checked in conjunction with engineering staff</p> <p>1.4. Approval is sought for the planned manufacture or modifications in accordance with organisational requirements and any necessary changes made</p> <p>1.5. Steps involved in the manufacture of, or modifications to plant, tooling, equipment and/or systems are identified in consultation with designated staff</p> <p>1.6. An inventory of required equipment, parts and components is established in accordance with organisational procedures, including an assessment of their current availability or the need to either manufacture, purchase or lease them.</p> <p>1.7. Fabrication/machining processes and instructions are determined and clarified with participating departments/sections/areas</p> <p>1.8. Timetable, budget, resource requirements, staffing and purchase/supply schedule for the modification of plant, tooling, equipment and/or systems are drawn up and confirmed in consultation with designated staff</p> <p>1.9. Approved plan is communicated to all relevant staff in management, production, engineering and other sections of the organisation concerned</p>
<p>2. Make parts for plant, tooling, equipment or systems</p>	<p>2.1. Specifications for parts are interpreted to determine the dimensions and processes for manufacture or modification</p> <p>2.2. Required raw materials, tools, equipment and assembly or fabrication jigs or fixtures are selected and prepared for the particular specification requirements</p> <p>2.3. Components or parts are manufactured or modified</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>in accordance with the required specifications</p> <p>2.4. Test equipment and rigs are used, where applicable, to confirm serviceability of finished tools, jigs or fixtures</p> <p>2.5. Completed parts are tagged, sealed and/or packaged as required and dispatched to the store or assembly area</p>
3. Manufacture or modify tools, jigs and/or fixtures	<p>3.1. Specifications for modifications of tools, jigs and/or fixtures are interpreted to determine the dimensions and processes for manufacture or modification</p> <p>3.2. Required raw materials, tools, equipment and assembly or fabrication jigs are selected and prepared for the particular specification requirements</p> <p>3.3. Modifications are conducted in accordance with the required specifications</p> <p>3.4. Test equipment and rigs are used, where applicable, to confirm serviceability of finished tools, jigs or fixtures</p> <p>3.5. Completed tools, jigs or fixtures are tagged, sealed and/or packaged as required and despatched to the store or relevant production area</p>
4. Cast, fabricate, machine, assemble and/or wire modified plant, tooling, equipment or systems	<p>4.1. Specifications for manufactured or modified plant, tooling, equipment and/or systems are interpreted to determine the dimensions and processes for manufacture or modification</p> <p>4.2. Required raw materials, parts, sub-assemblies, tools, equipment and assembly or fabrication jigs are selected and prepared for the particular specification requirements</p> <p>4.3. Plant, tooling and equipment is cast, fabricated, machined, assembled and/or wired</p>
5. Check/test manufactured or modified plant, tooling, equipment and/or systems	<p>5.1. Test equipment and rigs are used, where applicable, to confirm serviceability of manufacture or modified plant, tooling and equipment</p> <p>5.2. Completed plant, tooling and equipment is tagged, sealed and/or packaged as required and dispatched to the store or production area</p>
6. Document manufacture or modifications to plant, tooling, equipment or	<p>6.1. Manufacturing details or modifications to the plant, tooling and equipment are documented</p> <p>6.2. Documentation is stored and/or distributed to required personnel</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
systems	

## 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 seek approval from appropriate personnel to manufacture or modify equipment
- apply teamwork to a range of situations including the making of parts for plant, tooling, equipment or systems
- 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 manufacturing details and modifications to existing equipment and systems are documented in accordance with organisation 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 legislation, regulations, standards and codes of practice and organisation policies and procedures needed to carry out work in a manner which ensures the safety of people, equipment and the environment.
- methods of preparing and/or calibrating equipment
- interpreting performance results
- operation of systems and components
- organisational supply/replenishment systems and processes for materials, equipment and tools
- types of tools and equipment and procedures for their safe use, operation and maintenance
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- procedures for the recording, reporting and maintenance of workplace records and information.

## 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 legislation, regulations, standards, codes of practice and established safe practices and organisation policies and procedures for manufacturing or modifying of plant, tooling, equipment, product, or systems
- maintaining a working knowledge of current organisation inventory procedures
- 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:
- manufacturing or modifying of plant, tooling, equipment and/or systems effectively
- preparing reports of results
- achieving work quality goals
- completing work area housekeeping requirements including the documentation of project activity and process outcomes

#### 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.

#### 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



**EVIDENCE GUIDE**

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|  | <ul style="list-style-type: none"><li>• assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</li><li>• assessment may be applied under project related conditions (real or simulated) and require evidence of process</li><li>• 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.</li></ul> |
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## 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.

***OHS requirements*** may include:

Legislation and regulations, organisational safety policies and procedures and may include: the use of personal protective equipment and clothing, rescue services, fire fighting organisation and equipment, first aid equipment, hazard and risk control and elimination, systems covering the use of hazardous materials and substances and manual handling procedures including lifting and carrying.

***Organisation requirements*** may include:

- access and equity principles and practices
- environmental management (waste disposal, recycling and re-use guidelines)
- emergency and evacuation procedures
- equipment use procedures
- ethical standards
- legal obligations
- maintenance and storage procedures
- OHS requirements
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality assurance guidelines
- quality and continuous improvement processes and standards
- recording and reporting guidelines.

***Instructions*** may include:

- workplace procedures relating to the use and operation of tools and equipment
- departmental requirements
- organisation instructions, including job sheets, plans, specifications, drawings and designs
- workplace procedures relating to reporting and communications
- manufacturers' instructions for the use of

**RANGE STATEMENT**

	equipment and materials.
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**Unit Sector(s)**

<b>Unit sector</b>	Automotive Manufacturing
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**Competency field**

<b>Competency field</b>	Passenger Motor Vehicle
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**Co-requisite units**

<b>Co-requisite units</b>		
	Nil	Nil
	Nil	Nil