



Australian Government

Department of Education, Employment and Workplace Relations

AUMAKM4001 Program and monitor computerised equipment

Release: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the application of the required skills and knowledge to program and monitor computerised equipment with plant, tooling, equipment or systems required for the design, development and production of motor vehicles. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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Application of the Unit

Application of the unit	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.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills	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. Program computerised equipment	1.1. Applicable organisation requirements relevant to program and monitor computerised equipment are verified and complied with throughout the work activity 1.2. Instructions and plans are read and interpreted to identify processes and materials to complete work tasks 1.3. Electronic/microprocessor controlled equipment related to automotive development, final control modules or other computerised equipment are prepared for programming 1.4. Programmed electronic/microprocessor controlled equipment related to automotive development, final control modules or other computerised equipment is tested against job specifications
2. Step-through and monitor the operations of electronic/microprocessor controlled equipment	2.1. Electronic/microprocessor related to automotive development, final control modules or other computerised equipment controlled equipment is setup 2.2. Operations of the electronic/microprocessor controlled equipment related to automotive development, final control modules, or other computerised equipment are stepped-through and monitored 2.3. Any malfunctions of the electronic/microprocessor controlled equipment related to automotive development, final control modules, or other computerised equipment is identified and reported
3. Identify and diagnose fault conditions in electronic/microprocessor controlled equipment	3.1. Cause of malfunction in an electronic/microprocessor controlled equipment is diagnosed with the aid of fault-finding guides 3.2. A counter measure is proposed to rectify the malfunction
4. Rectify faults in electronic/microprocessor controlled equipment	4.1. Identified malfunction of electronic/microprocessor controlled equipment is reported and/or rectified 4.2. Required counter measures are programmed into computerised equipment 4.3. Revised program is tested, faults rectified and cleared for operational use
5. Document programming, monitoring and repairs to electronic/microprocessor controlled equipment.	5.1. Programming of the electronic/microprocessor controlled equipment is documented 5.2. Outcomes of the step-through and monitoring of operations of the electronic/microprocessor controlled equipment and any related fault rectification action are documented 5.3. Documentation on the outcomes of the step-through and monitoring of the operations of the electronic/microprocessor controlled equipment related to automotive

ELEMENT	PERFORMANCE CRITERIA
	development, and any related fault rectification action is stored and/or distributed to appropriate personnel 5.4. System/data/program is backed up where applicable

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- speak clearly and directly in order to report malfunctions of electronic/microprocessor controlled equipment
- apply teamwork to a range of situations, including the programming of computerised equipment
- 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 appropriate systems, data and programs are backed up routinely
- 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.
- product development/engineering area involving the mechanical, electrical and fabrication functions
- evaluation techniques
- operation of systems and components
- operation and selection of computer hardware and software applications/systems
- 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
- established communication channels and protocols
- interpreting and applying quality standards
- procedures for the recording, reporting and maintenance of organisation 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 programming and monitoring electronic/microprocessor controlled equipment related to automotive development, final control modules and other computerised equipment
- 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:
 - using computers and computerised equipment
 - using displays in plant, tooling, equipment or systems
 - 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
- 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

EVIDENCE GUIDE

	competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.
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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.

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.

Program and monitor computerised equipment may include:

- programming and monitoring electronic/ microprocessor controlled equipment related to automotive development
- knowledge of final control modules and other computerised equipment in projects in the design
- development
- production of motor vehicles.

Instructions may include:

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

Unit Sector(s)

Unit sector	Technology (Computing) - Manufacture
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Competency field

Competency field	Manufacturing - Common
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Co-requisite units

Not applicable.