



Australian Government

MEM07015 Set computer controlled machines and processes

Release: 2

MEM07015 Set computer controlled machines and processes

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM07015 Set computer controlled machines and processes (Release 1).

Release 1. Supersedes and is equivalent to MEM07015B Set computer controlled machines and processes.

Application

This unit of competency defines the skills and knowledge required to set computer controlled machines and processes.

All technical difficulties are resolved in consultation with appropriate technical advisers.

Where the setting of non-computer controlled machines or processes is required unit MEM07003 Perform routine machine setting should be selected.

Where the selection and use of general machining is required unit MEM07005 Perform general machining should be selected.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM14006	Plan work activities
MEM16006	Organise and communicate information
MEM18001	Use hand tools

Plus, one or more of the following, including their prerequisites:

MEM07005	Perform general machining
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MEM07028

Operate computer controlled machines and processes

Competency Field

Machine and process operations

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|---|--|-----|--|
| 1 | Determine job requirements | 1.1 | Follow standard operating procedures (SOPs) |
| | | 1.2 | Comply with work health and safety (WHS) requirements at all times |
| | | 1.3 | Use appropriate personal protective equipment (PPE) in accordance with SOPs |
| | | 1.4 | Identify job requirements from specifications, drawings, job sheets or work instructions |
| 2 | Mount work holding fixtures/devices/tools | 2.1 | Prepare machine to accept work holding fixtures/devices/tools |
| | | 2.2 | Mount pre-set tooling into machine/equipment, as required |
| | | 2.3 | Set work holding fixtures/devices on machine |
| | | 2.4 | Identify/verify tool offset or datum settings against job sheet |
| | | 2.5 | Load and select program and verify in accordance with job instructions |
| 3 | Conduct pre-start checks | 3.1 | Undertake pre-start checks |
| | | 3.2 | Observe correct safety procedures and check safety equipment for correct operation |

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

4	Set machine	4.1	Set/adjust machine to meet operational requirements and specifications
		4.2	Check production samples for compliance with specifications
		4.3	Replace pre-set tools, adjust tool offsets or take other corrective action in accordance with SOPs, as required
		4.4	Instruct operator, if necessary, ensuring that all safety procedures and devices are in place

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, accessibility of the item, and local industry and regional contexts) are included.

Machines include one (1) or more of the following:

- numerically controlled (NC) machines
- computer numerically controlled (CNC) machines
- industrial robots

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM07015 Set computer controlled machines and processes (Release 1).

Release 1. Supersedes and is equivalent to MEM07015B Set computer controlled machines and processes.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM07015 Set computer controlled machines and processes

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications, charts, lists, drawings and other applicable reference documents with respect to setting computer controlled machines and processes
- selecting appropriate tool and work piece holding fittings and fixtures
- mounting pre-set tooling and verifying tool offsets and/or datum settings against job sheets or instructions
- undertaking numerical operations and calculations in carrying out setting of machines and processes
- loading and verifying programs
- conducting pre-start checks, including checking safety features and safety equipment, for correct operation
- setting and adjusting machine
- measuring and verifying first-off samples for conformance with specifications
- identifying worn or damaged tooling and taking appropriate corrective action
- instructing machine operator on the sequence of operations.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- work holding fixtures/devices/tools and pre-set tooling for different machines and processes
- procedures for mounting work holding fixtures/devices/tools
- location of work holding fixtures/devices/tools relative to the machine datum or zero
- reasons for establishing tool offsets
- purpose of datum settings and sources of information on tool offsets and datum settings

- procedures to locate, load and verify programs
- pre-start checks, processes and procedures
- purpose and function of machine safety features and/or safety equipment
- machine/process, setting and operating procedures
- adjustments that can be made to the machine/process and the effect of adjustments on machine and operational specifications
- product or part specifications in relation to the machining process
- measuring devices for checking parts or products
- examples, effects and corrective action for worn or damaged tooling.

Assessment Conditions

- Assessors must:
 - have vocational competency in setting computer controlled machines and processes at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

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