



Australian Government

MEM18002 Use power tools/hand held operations

Release: 1

MEM18002 Use power tools/hand held operations

Modification History

Release 1. Supersedes and is equivalent to MEM18002B Use power tools/hand held operations

Application

This unit of competency defines the skills and knowledge required to use a range of hand held power tools and fixed power tools for hand held operations used in a variety of general engineering applications.

This unit should not be selected if the power tools used are dedicated to an operation or machine, e.g. nut-runner, air drill and power driver.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where the selection and use of engineering measuring equipment is required unit MEM12023 Perform engineering measurements should also be selected.

Where the selection and use hand tools is required unit MEM18001 Use hand tools should also 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

MEM11011 Undertake manual handling

MEM13015 Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

Competency Field

Maintenance and diagnostics

Elements and Performance Criteria

Elements describe the essential outcomes.

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

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	Use power tools for general engineering applications	2.1	Select power tools appropriate to the task requirements
		2.2	Use power tools for a determined sequence of operations to produce desired outcomes to job specifications
		2.3	Identify unsafe or faulty tools and mark for repair before, during and after use according to SOPs
		2.4	Undertake operational maintenance of tools according to principles, techniques and SOPs
		2.5	Store power tools safely in appropriate location according to manufacturers' recommendations and SOPs

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, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

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- Power tools include one (1) or more of the following:**
- electric or pneumatic/hydraulic drills
 - grinders
 - jigsaws
 - nibblers
 - cutting saws
 - sanders
 - planers
 - routers
 - pedestal drills
 - pedestal grinders
- Power tool operations include one (1) or more of the following:**
- clamping
 - alignments
 - adjustments
- Applications include one (1) or more of the following:**
- loosening and fastening items or components
 - shaping, finishing, cutting, grinding of metallic and non-metallic materials and/or tool bits to size and shape
- Drawings include one (1) or more of the following:**
- drawings and sketches not covered by AS 1100 Technical drawing or AS 1102 Graphical symbols for electrotechnical documentation, and their equivalents
 - work specifications that include graphic representations that do not require interpretation
- Clamping includes one (1) or more of the following:**
- multigrips
 - vices
 - jigs and fixtures
 - clamps
- Job specifications include one (1) or more of the following:**
- finish
 - size
 - shape
- Operational maintenance includes one (1) or more of the following:**
- cleaning
 - lubricating
 - tightening

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM18002B Use power tools/hand held operations

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 MEM18002 Use power tools/hand held operations

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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
- selecting and using a range of hand held and fixed power tools for a variety of general engineering applications
- following designated procedures for dealing with unsafe or faulty power tools
- undertaking routine maintenance and cleaning of power tools, including storage.

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)
- features and application of different power tools
- clamping/securing methods
- adjustments/alignments to a range of power tools
- common faults and/or defects in power tools
- procedures for marking unsafe or faulty power tools for repair
- routine maintenance requirements and cleaning of a range of power tools
- storage location and procedures of a range of power tools.

Assessment Conditions

- Assessors must:
 - have vocational competency in using power tools/hand held operations 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

- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, 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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