



Australian Government

MEM10008 Undertake commissioning procedures for plant and/or equipment

Release: 2

MEM10008 Undertake commissioning procedures for plant and/or equipment

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM10008 Undertake commissioning procedures for plant and/or equipment (Release 1).

Release 1. Supersedes and is equivalent to MEM10008B Undertake commissioning procedures for plant and/or equipment.

Application

This unit of competency defines the skills and knowledge required to undertake commissioning work on internally or externally located plant and/or equipment that is new, or replaced, or has been extensively modified (by people usually outside of the commissioning individual or team).

Where reports are required to be completed see unit MEM16010 Write reports.

Where additional specialist applications are required in undertaking commissioning procedures e.g. fluid power, instrumentation and programmable logic controller (PLC), see appropriate units.

This unit is not intended to be used by maintenance personnel completing their own work, including return to service work, as these activities are covered in the following units:

- MEM09011 Apply basic engineering design concepts
- MEM18004 Maintain and overhaul mechanical equipment
- MEM18006 Perform precision fitting of engineering components
- MEM18054 Fault find, test and calibrate instrumentation systems and equipment

Some jurisdictions may require the holder of this unit using the refrigeration and air conditioning pathways to be licensed or certified and users should check with the relevant authorities.

Band: B

Unit Weight: 4

Pre-requisite Unit

Path 1	MEM09002	Interpret technical drawing
	MEM10006	Install machine/plant
	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
	MEM18002	Use power tools/hand held operations
	MEM18003	Use tools for precision work
	MEM18006	Perform precision fitting of engineering components
	MEM18009	Perform precision levelling and alignment of machines and engineering components
	MEM18055	Dismantle, replace and assemble engineering components
Path 2	MEM09002	Interpret technical drawing
	MEM11011	Undertake manual handling
	MEM12002	Perform electrical/electronic measurement
	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
	MEM18002	Use power tools/hand held operations
	MEM18055	Dismantle, replace and assemble engineering components
	MEM18086	Test, recover, evacuate and charge refrigeration systems

	MEM18090	Maintain and repair industrial refrigeration systems and components
Path 3	MEM09002	Interpret technical drawing
	MEM11011	Undertake manual handling
	MEM12002	Perform electrical/electronic measurement
	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
	MEM18002	Use power tools/hand held operations
	MEM18055	Dismantle, replace and assemble engineering components
	MEM18089	Maintain and repair central air handling systems

Competency Field

Installation and commissioning

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

Elements describe the essential outcomes.

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

		1.4	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Plan commissioning procedure	2.1	Determine control system format and understand operational intent
		2.2	Sequence commissioning procedures effectively to meet requirement of components and control application
3	Assess system performance	3.1	Use correct measuring/test devices
		3.2	Take all necessary measurements/readings at appropriate points
		3.3	Record all variances from specifications in accordance with procedures
4	Adjust plant	4.1	Adjust plant/system performance to design and operational specifications utilising appropriate and correct techniques
		4.2	Resolve technical difficulties in consultation with appropriate technical advisors
5	Make reports	5.1	Ensure report/logs are produced on completed system/plant/machinery/status/performance in accordance with procedures, as required

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.

- Plant/system includes one (1) or more of the following:**
- rotating equipment and machinery
 - production equipment
 - plant and machinery
 - process equipment
 - machine tools

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM10008 Undertake commissioning procedures for plant and/or equipment (Release 1).

Release 1. Supersedes and is equivalent to MEM10008B Undertake commissioning procedures for plant and/or equipment.

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 MEM10008 Undertake commissioning procedures for plant and/or equipment

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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 and drawings for undertaking commissioning procedures for plant and equipment that are new, or replaced or extensively modified
- planning the commissioning procedure in consultation with appropriate personnel and ensuring approvals are obtained in accordance with procedures
- assessing system performance by taking necessary measurements and readings using appropriate test equipment in a safe and effective manner and recording all variances from specifications
- adjusting plant/system performance to specifications and resolving technical difficulties with appropriate personnel
- providing reports in accordance with SOPs, as required.

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)
- sequence of events in the commissioning of the machine/plant
- performance tests appropriate to the machine/plant to be commissioned
- measurements required to ensure conformance to specifications and correct points at which measurements are to be taken
- appropriate adjustments to bring the machine/plant into line with operational specifications based on engineering principles or appropriate technical advice
- reporting requirements relevant to the machine/plant being commissioned.

Assessment Conditions

- Assessors must:

- have vocational competency in undertaking commissioning procedures for plant and or equipment 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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