



Australian Government

Department of Education, Employment and Workplace Relations

MEM10008B Undertake commissioning procedures for plant and/or equipment

Release: 1

MEM10008B Undertake commissioning procedures for plant and/or equipment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers undertaking commissioning work on internally or externally located plant and/or equipment.
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Application of the Unit

Application of the unit	This unit applies to commissioning work undertaken 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). Technical difficulties are resolved in consultation with appropriate technical advisers. All work is undertaken to specifications supplied via engineering drawings and data sheets, written and verbal instructions, regulatory and legislative requirements. Additional specialisation units may be required for some specialist applications e.g. fluid power, instrumentation and PLC etc. This unit is not intended to be used by maintenance personnel completing their own work, including return to service work. These activities are covered in Unit MEM18004B (Maintain and overhaul mechanical equipment, and/or Unit MEM09011B (Apply basic engineering design concepts), and/or Unit MEM18006C (Repair and fit engineering components), and/or MEM18048B (Fault find and repair/rectify basic electrical circuits), and/or MEM18054B (Fault find, test and calibrate instrumentation systems and equipment). If reports are required, Unit MEM16010B (Write reports) should also be selected. Band: B Unit Weight: 4
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM09002B	Interpret technical drawing
	MEM10006B	Install machine/plant
	MEM12023A	Perform engineering measurements
	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations
	MEM18003C	Use tools for precision work
	MEM18006C	Repair and fit engineering components
	MEM18009B	Perform levelling and alignment of machines and engineering components
	MEM18055B	Dismantle, replace and assemble engineering components
Path 2	MEM09002B	Interpret technical drawing
	MEM12002B	Perform electrical/electronic measurement
	MEM12023A	Perform engineering measurements
	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations
	MEM18055B	Dismantle, replace and assemble engineering components
	MEM18086B	Test, recover, evacuate and charge refrigeration systems
	MEM18090B	Maintain and repair industrial refrigeration systems and components

Prerequisite units		
Path 3	MEM09002B	Interpret technical drawing
	MEM12002B	Perform electrical/electronic measurement
	MEM12023A	Perform engineering measurements
	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations
	MEM18055B	Dismantle, replace and assemble engineering components
	MEM18089B	Maintain and repair central air handling systems
Path 4	MEM09002B	Interpret technical drawing
	MEM10002B	Terminate and connect electrical wiring
	MEM10003B	Install and test electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c.
	MEM12002B	Perform electrical/electronic measurement
	MEM12023A	Perform engineering measurements
	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations
	MEM18049C	Disconnect/reconnect fixed wired equipment up to 1000 volts a.c. and 1500 volts d.c.
	MEM18055B	Dismantle, replace and assemble engineering components

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 performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and 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. Plan commissioning procedure	1.1. Commissioning procedure is undertaken and approvals are obtained in accordance with standard operating procedures.
2. Assess system performance	2.1. Correct measuring/test devices are used. 2.2. All necessary measurements/readings are taken at appropriate points. 2.3. All variances from specifications are recorded to standard operating procedures.
3. Adjust plant	3.1. Plant/system performance is adjusted to design and operational specifications utilising appropriate and correct techniques. 3.2. Technical difficulties are resolved in consultation with appropriate technical advisers.
4. Make reports	4.1. Report/logs are produced on completed system/plant/machinery/status/performance as required in accordance with standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- obtaining work approvals and permits
- selecting measuring/testing devices
- safely taking measurements/readings
- recording variations in machine/plant performance from specification
- making appropriate adjustments to machine/plant
- completing short reports using relevant technical terminology
- reading, interpreting and following information on written job instructions, specifications, manufacturer documents, commissioning procedures, charts, lists, drawings and other applicable reference documents
- planning and sequencing operations
- checking and clarifying task related information
- entering information onto standard workplace forms and reports

REQUIRED SKILLS AND KNOWLEDGE

- checking for conformance to specifications
- using precision measurement equipment
- undertaking numerical operations and calculations/formulae within the scope of this unit

Required knowledge

Look for evidence that confirms knowledge of:

- the 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
- use and application of personal protective equipment
- safe work practices and procedures
- relevant hazards and control measures related to the competency

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, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to undertake commissioning procedures for plant and/or equipment. Competency in this unit cannot be claimed until all prerequisites have been satisfied.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate. This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with undertaking commissioning procedures for plant and/or equipment or other units requiring the exercise of the skills and knowledge covered by this unit.

Method of assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

EVIDENCE GUIDE**Guidance information for assessment****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, if used in the performance criteria, is detailed below. 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) may also be included.

Plant/system

Rotating equipment and machinery, production equipment, plant and machinery, process equipment, and machine tools etc.

Unit Sector(s)**Unit sector****Co-requisite units****Co-requisite units**

Competency field

Competency field	Installation and commissioning
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