



Australian Government

MEM18011 Shut down and isolate machines/equipment

Release: 1

MEM18011 Shut down and isolate machines/equipment

Modification History

Release 1. Supersedes and is equivalent to MEM18011C Shut down and isolate machines/equipment

Application

This unit of competency defines the skills and knowledge required to isolate and shut down machines and equipment and applies to situations that require extensive system knowledge that exclude the straightforward starting/stopping of machinery/equipment through the use of simple switching, including use of emergency switches.

All shutdown and isolation must comply with relevant regulations, Australian Standards and legislative requirements governing isolation and shutdown.

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

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

Where the selection and use of tools is required unit MEM18001 Use hand tools and unit MEM18002 Use power tools/hand held operations should also be selected as appropriate.

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

Band:

This unit has dual status and is to be regarded as both a specialisation Band A unit and Specialisation Band B unit for progression to C7 (AQF level IV).

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, job sheets or work instructions
		1.5	Identify any relevant regulations, Australian Standards and legislative requirements governing isolation and shutdown
2	Shut down and isolate machine/equipment	2.1	Determine machine/equipment operational function
		2.2	Undertake shutdown/isolation sequence safely and to SOPs
		2.3	Ensure machine/equipment is depressurised/emptied/de-energised/bled to SOPs
		2.4	Verify safe shutdown/isolation of machine/equipment
		2.5	Install safety/security lock-off devices and signage
		2.6	Confirm shutdown and isolation complies with relevant regulations, Australian Standards and legislative requirements governing isolation and shutdown

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.

- | | |
|---|---|
| Shut down/isolate
includes one (1) or more
of the following: | <ul style="list-style-type: none">• isolation of mechanical and electrical drives• pipework (pressure)• rotating equipment utilising electrical lock-off isolators• mechanical and power driven valves |
| Machine/equipment
includes one (1) or more
of the following: | <ul style="list-style-type: none">• manual• semi-automatic• automatic machines of a stand-alone, continuous production or process nature |

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM18011C Shut down and isolate machines/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 MEM18011 Shut down and isolate machines/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, charts, lists and other applicable reference documents to shut down and isolate machines and equipment
- shutting down machines/equipment ensuring machine/equipment is depressurised/emptied/de-energised/bled according to procedures
- isolating machines/equipment safely in accordance with SOPs, relevant regulations, Australian Standards and legislative requirements governing isolation and shutdown and verifying safe isolation
- installing safety/security lock-off devices and signage.

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)
- operational function of the machine/equipment
- shutdown sequence
- procedures and safety precautions for shutting down and isolating the machine/equipment
- procedures for purging/de-energising the machine/equipment and reasons for doing so
- procedures for verifying machine/equipment shutdown and isolation and reasons for verifying
- relevant regulations, Australian Standards and legislative requirements governing isolation and shutdown
- safety/security lock-off devices and signage to be installed
- reasons and procedures for installing lock-off devices and signage
- reasons for ensuring the machine/equipment is left in a clean safe state.

Assessment Conditions

- Assessors must:

- have vocational competency in shutting down and isolating machines/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
- 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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