



Australian Government

MEM07033 Operate and monitor basic boiler

Release: 1

MEM07033 Operate and monitor basic boiler

Modification History

Release 1. Supersedes and is equivalent to MEM07033B Operate and monitor basic boiler

Application

This unit of competency defines the skills and knowledge required to perform start-up, take-over/handover, monitor, shutdown and storage of a basic boiler used for all purposes, including the generation of steam.

All work is carried out to applicable state/territory and national work health and safety (WHS) legislation, standards and codes of practice.

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, as appropriate should also be selected.

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

Band: A

Unit Weight: 6

Pre-requisite Unit

MEM11011	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

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.
---	---

- | | | | |
|---|----------------------|-----|---|
| 1 | Determine job | 1.1 | Follow standard operating procedures (SOPs) |
|---|----------------------|-----|---|

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
	requirements	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
2	Carry out pre-operational checks	2.1	Undertake pre-operational checks of boiler to plant operating procedures
		2.2	Identify maintenance requirements and report in accordance with procedures
3	Maintain health and safety standards in work area	3.1	Identify hazards and potential hazards and report according to SOPs
		3.2	Select hazard prevention/control measures, as required
4	Start boiler and conduct hand-over/take-over procedures	4.1	Start boiler and bring online safely, consistent with workplace procedures and production requirements
		4.2	Confirm operating status of boiler
		4.3	Maintain operating log and communicate boiler status/operation according to workplace procedures
5	Operate, monitor and shut down boiler	5.1	Operate boiler and monitor consistent with production and safety requirements
		5.2	Conduct boiler water quality tests and adjust boiler water quality to manufacturers' recommendations and workplace procedures, as required
		5.3	Act upon boiler failures/emergencies according to workplace procedures and notify downstream users, if necessary

Elements describe the essential outcomes.

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

- | | | | |
|---|---|-----|---|
| | | 5.4 | Shut down boiler consistent with workplace procedures, production and safety requirements |
| 6 | Carry out boiler shutdown for an internal inspection | 6.1 | Shut down boiler for internal inspection |
| | | 6.2 | Clean boiler internally and externally to manufacturers' recommendations and workplace procedures |
| 7 | Store boiler in shutdown mode | 7.1 | Identify manufacturers' recommendations and workplace procedures required for shutdown storage mode |
| | | 7.2 | Store boiler in identified shutdown mode |

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.

Pre-operational checks include one or more of the following:

- feed water supply
- boiler water level
- fuel supply/heat source
- boiler valves - their operation and position
- combustion air supply
- combustion equipment

Boilers include the following:

- single fixed combustion air supply, non-modulating single heat source and fixed firing rate

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.

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

- chemical
- thermal
- manual handling
- guarding of machinery
- illumination of work area
- rubbish and combustibles
- leakage of steam and fuel

Monitor includes one (1) or more of the following:

- steam pressure
- flame and combustion conditions
- feed system and condensate returns
- fuel system
- water level
- combustion management system
- water management system
- boiler and steam manifold fittings
- soot blowers

Handover includes the following:

- previous load requirements
- maintenance issue, including equipment isolated for maintenance
- operational incidences
- completing/reading operating log
- general inspection of boiler to detect any defects
- accept responsibility of boiler
- noted equipment malfunctions
- required equipment tests

Storage mode includes one (1) or more of the following:

- wet
- dry
- open condition
- closed condition

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM07033B Operate and monitor basic boiler

Links

Companion Volume implementation guides are found in VETNet -

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