



Australian Government

MEM50009 Safely operate a mechanically powered recreational boat

Release: 1

MEM50009 Safely operate a mechanically powered recreational boat

Modification History

Release 1. Supersedes and is equivalent to MEM50009B Safely operate a mechanical powered recreational boat

Application

This unit of competency was developed by the National Marine Safety Committee (NMSC) and defines the skills and knowledge required to safely handle/operate a powered recreational boat on coastal and inland waters and includes manoeuvring and handling the boat as well as safe navigation and anchoring.

This unit is one of three core competencies that have been adopted by all government marine safety authorities to contribute to and promote the safe use of waterways and awareness of boating safety and applies specifically to mechanical powered recreational boats, including personal watercraft. However, it is recognised that some aspects of this competency apply to any recreational vessel.

Unit MEM50008 Carry out trip preparation and planning and unit MEM50010 Respond to boating emergencies and incidents are the other two NMSC core units.

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: 2

Pre-requisite Unit

MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Boating services

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
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Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	Manoeuvre and handle the boat	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Undertake a pre-start checks and start motor
		1.4	Manoeuvre boat safely according to conditions and in accordance with water traffic regulations
		1.5	Monitor performance of the boat and personnel at all times
		1.6	Consider impact of boat use on others and the environment
		1.7	Use safety equipment, stow and, as required, wear in accordance with legislation and recognised regulations and rules
2	Navigate safely	2.1	Identify aids to small craft navigation
		2.2	Apply collision avoidance techniques when required in accordance with relevant legislation, recognised regulations and rules
		2.3	Carry out operation of the boat at all times in accordance with relevant legislation, recognised regulations and rules
		2.4	Use navigational aids and landmarks to determine and monitor boat position
		2.5	Take into account hazards and conditions in navigating the boat
3	Anchor the boat	3.1	Select anchorage site in accordance with prevailing and forecast conditions and in accordance with legislation
		3.2	Use type of anchor and anchoring system suitable for location
		3.3	Lower, set and monitor anchor according to prevailing conditions
		3.4	Retrieve and securely stow anchor

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.

Pre-start checks include the following:

- fuel is connected
- battery is charged and connected
- kill switch
- fumes and petrol
- fuel and water leaks
- hatches/windows/doors are open
- ventilation
- sea-cock opening
- loose gear is secured
- marine radio is turned on and radio aerials raised
- bilge water levels checked
- navigation lights

Manoeuvring conditions include the following:

- from or to a ramp, pontoon, wharf, mooring, anchor, confined areas, such as narrow channels, marinas, moorings and obstructions
- sea-states, including bars, waves, rips, high seas, tidal surges, choppy conditions and wakes
- low speed/high speed
- poor visibility
- effect of wind
- large vessels

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**Safe manoeuvring
includes the following:**

- steer straight line
- astern
- figure-eight
- right of way
- port-starboard
- throttle control
- emergency stop
- trim and stability of vessel
- towing or being towed
- berthing
- standing-on/stemming the tide
- retrieval of person overboard

**Monitoring includes the
following:**

- cooling system
- bilge
- portholes and hatches
- location and welfare of persons on board
- oil, fuel and water
- radio
- position of boat
- other water users
- battery and electrical systems

**Others and environment
include the following:**

- noise
- wake
- safety of others
- disturbance or injury to wildlife
- disposal of waste and bilge water
- effects of detergent and anti-foul
- fuelling arrangements

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Aids to small craft navigation include one (1) or more of the following:

- IALA Buoyage System ‘A’
- charts
- compasses
- global positioning system (GPS)
- sounder
- tide tables
- passage plan
- marine references
- notices to mariners
- radio navigational warnings

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.

Relevant legislation, recognised regulations and rules include the following:

- collision regulations:
 - navigating in narrow channels
 - giving way to other vessels
 - overtaking, proper lookout
 - sound signals
 - lights and shapes
 - responsibilities and duty of care
 - use of buoyage system
 - speed
 - recognition of lights and markers
 - rules of road
 - recognition of operation areas
 - specific activity rules, e.g. personal watercraft (PWCs), water skis and equipment requirements
 - accident/incident reporting
- marine regulations:
 - safety regulations
 - licensing and registration
 - speed limit restrictions
 - distance off requirements
 - port limits/rules
 - marine incident reporting
 - carrying capacity
 - drug and alcohol limits/effects
 - age of operators
- environmental and wildlife regulations as relevant and applicable to the operation of boats

Hazards and conditions include the following:

- weather
- set and drift
- effect of wind, tide and currents
- submerged objects
- other boats and wash
- restricted waters
- crossing bars

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.

Types of anchor include one (1) or more of the following:

- Danforth
- Grapnel/Reef
- Bruce
- Plough
- Admiralty
- Sarca
- sea anchor

Anchoring systems include one (1) or more of the following:

- multiple anchors
- bow and stern anchors
- mooring buoy

Unit Mapping Information

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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 MEM50009 Safely operate a mechanically powered recreational boat

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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
- conducting pre-start checks
- manoeuvring and handling boat safely and accurately according to conditions and in accordance with water traffic regulations
- monitoring performance of boat and be aware of impact of boat use on others and the environment
- navigating safely, taking hazards into account using navigational aids and landmarks to determine and monitor boat position
- anchoring the boat using the type of anchor and anchoring system suitable for location.

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
- pre-start checks
- boating and other relevant legislation, rules and regulations
- legislative requirements regarding the use of safety equipment
- area of activity hazards and prevailing conditions
- boating information resources
- environmental awareness.

Assessment Conditions

- Assessors must:
 - have vocational competency in safely operating a mechanical powered recreational boat 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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