



Australian Government

MEM50001 Classify recreational boating technologies and features

Release: 1

MEM50001 Classify recreational boating technologies and features

Modification History

Release 1. Supersedes and is equivalent to MEM50001B Classify recreational boating techniques and features

Application

This unit of competency defines the skills and knowledge required to recognise vessel features, fittings and fixtures; correctly identify power and transmission systems; describe system operating purpose; and use appropriate terminology.

This unit applies to the identification of vessel types and to the classification of vessels according to their main features and relates to recreational vessels and covers engine and sail powered as well as rowed vessels and the depth of knowledge required is sufficient to be able to identify one vessel from another and be able to describe its method of propulsion where applicable.

Detailed features of hulls, power plants and trailers are covered by other competencies.

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

Band: E

Unit Weight: 0

Pre-requisite Unit

MEM13015 Work safely and effectively in manufacturing and engineering

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.

1	Identify vessel configurations used in boating	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
	applications	1.3	Identify hull forms and superstructure features
		1.4	Match hull designs to normal vessel application
		1.5	Identify construction materials
2	Identify and describe the functions of the major systems of a recreational vessel and trailer	2.1	Identify systems used for vessel propulsion, steering, navigation, communication, services and appliances and explain functions
		2.2	Identify trailer components and explain functions
3	Confirm vessel origins	3.1	Locate vessel identification plates and registration tags
		3.2	Locate and record engine number, model designation and other details
		3.3	Use identification data to confirm vessel year of manufacture, refurbishment (and/or registration)
4	Identify configuration of motorised propulsion systems	4.1	Locate and categorise vessel power plant(s) for fuel system, number and configuration of cylinders
		4.2	Identify engine cooling and control systems and categorise
		4.3	Identify and categorise engine lubricating systems
		4.4	Categorise vessel propulsion (transmission) system for type and operation
		4.5	Describe operating cycles and cylinder configuration for 2 stroke, 4 stroke, diesel and petrol powered engines

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.

- Trailer components include one (1) or more of the following:**
- winching
 - coupling
 - load securing
 - braking
 - suspension
 - electrical systems

- Construction materials include one (1) or more of the following:**
- glass reinforced plastics
 - composite materials
 - aluminium
 - steel
 - timber:
 - clinker
 - carvel
 - cold moulded
 - plywood sheeted

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM50001B Classify recreational boating techniques and features

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 MEM50001 Classify recreational boating technologies and features

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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
- discerning differences in hull shapes and types as well as construction materials, propulsion and steering systems, power plants, ancillary systems, fittings and fastenings
- locating, reading and interpreting information on identification and compliance plates, registration tags, engine and other component identification numbers
- identifying different types of power plants, engine cooling and lubrication systems and transmission types.

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
- typical hull shapes and design features of recreational sail, powered and non-powered craft, including hard chine, round bilge, planing hulls, multi-hulls, inflatables, rigid and swing keel and centre board
- typical superstructure configurations and general deck layouts of recreational sail, powered and non-powered craft, including fully open, flush decks, bow riders, half cabins and fly bridges
- typical sail and mast arrangements for recreational sailing craft, including mast configurations, basic rigging arrangements and sail types, including mainsail, genoa and spinnaker
- construction materials, including glass reinforced plastics and composite materials, aluminium and steel and types of internal combustion engines used for inboard and outboard propulsion systems, including two and four cycle; different cylinder layouts and different fuel types, including petrol and diesel, liquid or air cooling, starting systems and lubrication methods
- propulsion systems, including single and multi-screw, jet drives, clutches and gearboxes, including stern drives and outboard drives as well as vee drives and bow thrusters
- steering systems, including tillers, rods/chains/cable drives, hydraulic and rudder types

- features and functions of attached navigation and communication devices, including navigational lighting, compass, global positioning system (GPS), radar, depth sounder, logs, radios and audible alarms
- features and functions of trailer components, including winches, couplings, load securing, braking, suspension and electrical systems
- use of information on identification and compliance plates, registration tags, engine and other component identification numbers.

Assessment Conditions

- Assessors must:
 - have vocational competency in classifying recreational boating techniques and features 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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