



Australian Government

Department of Education, Employment and Workplace Relations

MEM50001B Classify recreational boating technologies and features

Release: 1

MEM50001B Classify recreational boating technologies and features

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers recognising vessel features, fittings and fixtures; correctly identifying power and transmission systems; describing system operating purpose; and using appropriate terminology.
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Application of the Unit

Application of the unit	This unit applies to the identification of vessel types and to the classification of vessels according to their main features. It relates to recreational vessels and covers engine and sail powered as well as rowed vessels. The depth of knowledge required is sufficient to be able to identify one vessel from another and to be able to describe its method of propulsion where applicable. Detailed features of hulls, power plants, trailers etc. are covered by other competencies. All work and work practices are undertaken to regulatory and legislative requirements. Band: E Unit Weight: 0
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

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. Identify vessel configurations used in boating applications	1.1. Hull forms and superstructure features are identified. 1.2. Hull designs are matched to normal vessel application. 1.3. Construction materials are identified.
2. Identify and describe the functions of the major systems of a recreational vessel and trailer	2.1. Systems used for vessel propulsion, steering, navigation, communication, services and appliances are identified and functions are explained. 2.2. Trailer components including winching, coupling, load securing, braking, suspension and electrical systems are identified and functions are explained.
3. Use identification information to confirm vessel origins	3.1. Vessel identification plates and registration tags are located. 3.2. Engine number, model designation and other details are located and recorded. 3.3. Identification data is used to confirm vessel year of manufacture, refurbishment (and/or registration).
4. Identify configuration of motorised propulsion systems	4.1. Vessel power plant(s) are located and categorised for fuel system, number and configuration of cylinders. 4.2. Engine cooling and control systems are identified and categorised. 4.3. Engine lubricating systems are identified and categorised. 4.4. Vessel propulsion (transmission) system is categorised for type and operation. 4.5. Operating cycles and cylinder configuration for 2 stroke, 4 stroke, diesel and petrol powered engines are described.

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:

- discerning differences in hull shapes and types as well as construction materials,

REQUIRED SKILLS AND KNOWLEDGE

propulsion and steering systems, power plants, ancillary systems, fittings and fastenings

- 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

Required knowledge

Look for evidence that confirms knowledge of:

- typical hull shapes and design features of recreational sail, powered and non-powered craft including but not limited to hard chine, round bilge, planing hulls, multi-hulls, inflatables, rigid and swing keel, centre board
- typical superstructure configurations and general deck layouts of recreational sail, powered and non-powered craft including but not limited to fully open, flush decks, bow riders, half cabins, fly bridges
- typical sail and mast arrangements for recreational sailing craft including but not limited to mast configurations, basic rigging arrangements and sail types such as mainsail, genoa, spinnaker etc.
- construction materials such as glass reinforced plastics and composite materials, aluminium and steel and timber. Timber construction may include clinker, carvel, cold moulded and plywood sheeted etc.
- types of internal combustion engines used for inboard and outboard propulsion systems including two and four cycle, different cylinder layouts, different fuel types including petrol and diesel, liquid or air cooling, starting systems, lubrication methods
- propulsion systems including but not limited to single and multi-screw, jet drives, clutches and gearboxes including stern drives and outboard drives as well as vee drives, bow thrusters
- steering systems including tillers, rods/chains/cable drives, hydraulic, rudder types
- features and functions of attached navigation and communication devices such as navigational lighting, compass, global positioning system, radar, depth sounder, logs, radios, 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

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 classify recreational boating technologies and features through the recognition of vessel features/fittings/fixtures, the correct identification of power and transmission systems, and be able to describe system operating purposes and use appropriate terminology.

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 associated with a marine environment, 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,

EVIDENCE GUIDE	
	standards, manuals and reference materials.
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.	

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Boating services
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