



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **MEM50005B Refuel vessels**

**Release: 1**

## MEM50005B Refuel vessels

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers refuelling vessels and appliances.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to refuelling recreational vessels in both land and water environments. It relates to workplaces in which vessels are built, repaired, stored, sold and transported.</p> <p>The unit includes skills and knowledge that are particular to refuelling in a marine environment and are in addition to those safety requirements normally applied in the workplace.</p> <p>All work and work practices are undertaken to regulatory and legislative requirements.</p> <p><b>Band: E</b></p> <p><b>Unit Weight: 0</b></p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		
<b>Path 1</b>	MEM50002B	Work safely on marine craft
	MEM50003B	Follow work procedures to

<b>Prerequisite units</b>		
		maintain the marine environment

## Employability Skills Information

<b>Employability skills</b>	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. Match fuels and additives to marine applications	1.1. Fuels are selected to match the engine or appliance. 1.2. Alternative fuel applications are considered. 1.3. Fuel additives and lubricants are selected based on vessel/appliance use and manufacturer requirements.
2. Identify fuel handling risk, precautions and regulatory requirements	2.1. Personal protection for contact with fuels is identified and used. 2.2. Dangers of volatile fuel liquids and vapours are identified. 2.3. Precautions for minimising risks associated with volatile liquids are identified in workplace procedures. 2.4. Procedures to prevent build up of volatile vapours and gases are identified. 2.5. Regulatory requirements for refilling portable fuel containers are identified.
3. Identify safety and environmental requirements for fuel refill areas	3.1. Correct locations for refuelling activities are used. 3.2. The workplace strategies/procedures to limit danger from static electricity and other sources of ignition are applied. 3.3. Protection systems that provide physical barriers to minimise accidental collision with fuelling facilities are identified and used to prevent spills entering drains or the water environment. 3.4. Appropriate ventilation is used. 3.5. Signage for public safety needs and Hazchem requirements is identified. 3.6. Emergency stops and shut-off devices are identified and activation methods are described.
4. Refill fuel containers	4.1. Portable liquid fuel tanks and appliances are refilled. 4.2. Gas cylinders are refilled. 4.3. On-board fuel tanks are refilled. 4.4. Fuel levels are checked for each method of storage. 4.5. Emergency procedures for leaks, spills and fire are identified.
5. Replace gas cylinders	5.1. Appliances and pilot lights are turned off. 5.2. Gas lines are safely vented after closing gas valves. 5.3. Fittings are leak tested after fitting cylinders. 5.4. Bottle restraining devices are fitted and adjusted.

ELEMENT	PERFORMANCE CRITERIA
	5.5. Emergency procedures for leaks and fire are identified.
6. Contain and clean up spills	6.1. Potential for spills is identified. 6.2. Procedures for notification of spills are followed. 6.3. Workplace procedures are followed to contain spill and minimise any environment or safety dangers. 6.4. Clean up equipment is identified and used.

## 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:

- identifying correct fuel for the application
- identifying correct lubricant for the application
- selecting appropriate protective equipment
- sourcing and interpreting Hazchem (or similar) requirements
- safely working with fuels and lubricants
- refilling fuel containers and tanks
- checking fuel levels using gauges, dipsticks, sight tubes
- refilling and replacing gas cylinders
- leak testing gas cylinders

#### Required knowledge

Look for evidence that confirms knowledge of:

- different fuels and their applications
- personal and environmental dangers associated with fuels and refuelling/filling
- risk minimisation
- use of appropriate personal protective equipment associated with fuels
- selection of appropriate fire fighting equipment
- reduction of vapours
- correct handling of gas cylinders including condition and lifespan
- dealing with spills
- emergency procedures



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>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.</p>	
<p><b>Overview of assessment</b></p>	<p>A person who demonstrates competency in this unit must be able to safely refuel marine vessels with the correct fuels, minimise any spills and clean up. They will also be able to replace and refill portable gas cylinders as well as any other fuelled appliances. Competency in this unit cannot be claimed until all prerequisites have been satisfied.</p>
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>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.</p>
<p><b>Context of and specific resources for assessment</b></p>	<p>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.</p> <p>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.</p>
<p><b>Method of assessment</b></p>	<p>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,</p>

<b>EVIDENCE GUIDE</b>	
	standards, manuals and reference materials.
<b>Guidance information for assessment</b>	

## Range Statement

<b>RANGE STATEMENT</b>	
<p>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.</p>	
<b>Fuels</b>	<p>Fuels include all of the hydrocarbon-based fuels such as:</p> <ul style="list-style-type: none"> <li>• petrol (gasoline) including premixed two stroke fuel</li> <li>• diesel (distillate)</li> <li>• kerosene</li> <li>• methylated spirits</li> <li>• lighter fluid/white spirits</li> <li>• liquefied petroleum gas (LPG)</li> </ul>
<b>Engine or appliance</b>	<p>May include:</p> <ul style="list-style-type: none"> <li>• internal combustion engines used for propulsion or auxiliary power</li> <li>• stoves</li> <li>• refrigerators</li> <li>• heaters</li> <li>• lights</li> </ul>
<b>Personal protection</b>	<p>Personal protective equipment can include:</p> <ul style="list-style-type: none"> <li>• goggles/face shields</li> <li>• masks or respirators</li> <li>• gloves and appropriate clothes/garments</li> </ul>
<b>Contain spill</b>	<p>Spill containment and clean up can include:</p> <ul style="list-style-type: none"> <li>• bunding and drain covers</li> </ul>



**RANGE STATEMENT**

	<ul style="list-style-type: none"><li>• chemical dispersal agents</li><li>• absorptive materials</li><li>• containment booms and portable bunding</li></ul>
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**Unit Sector(s)**

<b>Unit sector</b>	
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	Boating services
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