



Australian Government

MARB009 Manage refuelling

Release: 2

MARB009 Manage refuelling

Modification History

Release 2. ISC upgrade. Correction to typographical error in Performance Criteria 2.9.

Release 1. New unit of competency.

Application

This unit involves the skills and knowledge required to manage refuelling and fuel transfer operations.

This unit applies to engine workers in the maritime industry working as a Marine Engine Driver Grade 1 Near Coastal on vessels up to 1500 kW.

This unit has links to legislative and certification requirements.

Pre-requisite Unit

Not applicable.

Competency Field

B - Equipment Checking and Maintenance

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Plan refuelling or fuel transfer operations	1.1 Fuel tanks are dipped to establish current level of fuel 1.2 Fuel is ordered according to organisational procedures 1.3 Amount and positioning of fuel on board vessel is calculated with reference to tank tables 1.4 Impact of refuelling on safety and operation of vessel is determined and appropriate strategies are implemented 1.5 Local port authorities are informed of vessel location for

- bunkering operations and duration of bunkering
- 2 Prepare vessel for refuelling or fuel transfer operations**
- 2.1 Vessel is positioned and secured for refuelling
 - 2.2 All personal protective equipment is accessed and used
 - 2.3 Bunkering equipment is correctly deployed according to organisational procedures
 - 2.4 Safety zone for refuelling process is established and maintained for full duration of operation
 - 2.5 Procedures for refuelling are established with bunker operator and completed lists are checked according to organisation and safety management system (SMS) requirements
 - 2.6 Bunker hose is securely connected to vessel fuel manifold
 - 2.7 Tank valves are opened as necessary and refuelling operations are performed safely according to SMS and regulatory requirements
 - 2.8 Tanks are dipped to ensure correct amount of fuel has been received
 - 2.9 Fuel samples are taken to check quality of fuel received and appropriate action is taken if fuel sample is not to specification
- 3 Complete refuelling operations**
- 3.1 Shut-down procedures are conducted according to organisational procedures
 - 3.2 Malfunctions, faults, irregular performance or damage to refuelling equipment are recorded and repairs are organised, according to organisational procedures
 - 3.3 Refuelling equipment is maintained and secured according to organisational procedures
 - 3.4 Refuelling records are completed according to organisational procedures and regulatory requirements
- 4 Manage an emergency**
- 4.1 Appropriate response is made to an emergency situation according to organisational procedures
 - 4.2 Safety zone is closed off and isolated according to organisational procedures
 - 4.3 All persons in the safety zone are correctly notified and their

activities are managed to ensure safety according to organisational procedures

- 4.4 Appropriate authorities are notified and actions are taken as directed according to emergency procedures and regulatory requirements
- 4.5 Documentation of emergency is completed according to organisational procedures and relevant maritime authority

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Specifies 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.

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Impact of refuelling on safety and operation of vessel include one or more of the following:

- hot work
- increase in the potential for fire
- loading and discharging operations
- stability including the effect of free surface
- toxic fumes
- work being conducted by shore contractors

Personal protective equipment must include:

- gloves
- overalls
- work boots

Bunkering equipment

- bunding

includes one or more of the following :

- bunker flag
- fire extinguishers
- no smoking signs
- radios
- sample containers
- scupper plugs
- sounding tape
- spill kit

Safety zone includes one or more of the following:

- area where no smoking or hot work is permitted
- area that can contain a spill

Procedures for refuelling includes one or more of the following:

- establishing:
- flow rates
- system of communication with supplier in relation to starting and shut-down procedures
- emergency disconnection procedures

Shut-down procedures include one or more of the following:

- blowing through of bunker hoses
- disconnecting bunker hose
- isolating fuel valves
- stowing equipment

Refuelling records include one or more of the following:

- bunker receipt
- log book entry
- oil record book

Emergency situations include one or more of the following:

- broken mooring lines
- fire
- oil spill

Documentation includes one or more of the following:

- incident report forms
- logbook entry

Unit Mapping Information

This is a new unit. This unit is equivalent to MARB4003A Manage refuelling.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

Assessment Requirements for MARB009 Manage refuelling

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- completing required records
- implementing procedures for dealing with an oil spill
- measuring tank levels
- recognising faulty equipment and taking appropriate action
- recognising problems and hazards during refuelling and fuel transfer operations, and taking appropriate action
- selecting and using relevant equipment required for refuelling and fuel transfer operations
- taking appropriate action in an accidental spillage, fire or safety incident during refuelling and fuel transfer operations.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- environmental protection measures to be applied during refuelling or transfer operations
- functions and responsibilities of crew during refuelling or transfer operations
- hazards and safety precautions to be observed during refuelling or transfer operations
- own ability and limits to rectify irregularities and faults
- refuelling and fuel transfer procedures applying to commercial vessels
- requirements for reporting incidents
- work health and safety (WHS)/occupational health and safety (OHS) and pollution control legislation and policies.

Assessment Conditions

Assessors must satisfy National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) assessor requirements.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

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.

Resources for assessment must include access to:

- tools, equipment, machinery, materials and personal protective equipment currently used in industry
- applicable documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- range of relevant exercises, case studies and/or simulations.

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