



Australian Government

MARB009 Manage refuelling

Release: 2

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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

Elements describe the essential outcomes.

1 Plan refuelling or fuel transfer operations

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 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>