



Australian Government

MARC028 Operate deck machinery, cargo handling gear and equipment on a vessel

Release: 1

MARC028 Operate deck machinery, cargo handling gear and equipment on a vessel

Modification History

Release 1. New unit of competency.

Application

This unit involves the skills and knowledge required to operate deck machinery and cargo handling gear and equipment on a vessel.

This unit applies to individuals working as an Integrated Rating or Able Seafarer Deck on a range of vessels.

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

Pre-requisite Unit

Not applicable.

Competency Field

C – Equipment Operations

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for operations

PERFORMANCE CRITERIA

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

- 1.1 Routine pre-operational checks of deck machinery or cargo handling gear and equipment are completed prior to use according to manufacturer specifications and organisational procedures
- 1.2 Properties of cargo being transported are identified and their impact on safety, the environment and vessel operations is established

- 1.3 Preparations for operations are made and lifting equipment is set up according to organisational procedures
 - 1.4 Tools and equipment appropriate to work requirements are selected, checked for safety and set up for operation
 - 1.5 Safety equipment appropriate to work requirements are made ready and confirmed to be in good condition
 - 1.6 Methods of communication are established and agreed to
 - 1.7 Equipment faults or malfunctions are identified and reported according to organisational procedures
 - 1.8 Work health and safety (WHS)/occupational health and safety (OHS) hazards in work area are identified, and risks are assessed and reported according to organisational procedures
- 2 Undertake deck machinery, cargo handling gear and equipment operations**
 - 2.1 Suitable personal protective equipment is selected and used according to organisational procedures
 - 2.2 Hazard control procedures are identified and applied to ensure safe operation of deck machinery and cargo handling equipment
 - 2.3 Deck machinery and cargo handling gear and equipment are operated in a safe and controlled manner
 - 2.4 Performance and efficiency of deck machinery and cargo handling gear and equipment operations is monitored
 - 2.5 Safe operational practices are used to anticipate and control hazards
 - 2.6 Adverse sea and weather conditions that impact on operation of deck machinery, and cargo handling gear and equipment are identified and operational practices are adjusted to maintain safety of vessel and personnel
 - 2.7 Measures to prevent pollution during normal and emergency situations are applied according to regulatory requirements and organisational procedures
 - 2.8 Spill containment procedures are correctly implemented according to regulatory requirements and organisational procedures
- 3 Complete operations**
 - 3.1 Shut-down procedures are conducted according to

manufacturer instructions and organisational procedures

- 3.2 Malfunctions, faults, irregular performance or damage to deck machinery and cargo handling gear and equipment are reported according to organisational procedures
- 3.3 Deck machinery and cargo handling gear and equipment are maintained and secured according to organisational procedures
- 3.4 Operational records are completed according to organisational procedures

Foundation Skills

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

Range of Conditions

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

Non-essential conditions can be found in the Companion Volume Implementation Guide.

- Deck machinery and equipment includes one or more of the following:
- anchoring equipment
 - blocks and tackle
 - booms
 - cables and chains
 - cranes
 - derricks
 - fibre and wire ropes
 - freeing ports
 - hatches and hatch covers
 - hoists
 - internal ramps associated with bow and stern door loading arrangements
 - pipeline systems – bilge and ballast suction and wells
 - side/bow/stern doors or elevators
 - valves and pumps
 - watertight doors
 - welding, brazing, cutting equipment
 - winches and capstans

Cargo includes one or more of the following:

- windlasses
- chemicals and oils
- explosives
- general cargo, break bulk, unitised or in containers
- hazardous or dangerous goods
- heavy lifts
- liquids in portable containers
- liquefied gas
- livestock
- mineral concentrates
- refrigerated cargo
- scrap, pig iron ingots, steel coils and sheets
- solid bulk materials
- timber

Cargo handling gear and equipment includes one or more of the following:

- chain blocks
- chains
- eye bolts
- fibre ropes
- flexible steel wire rope (FSWR)
- rigging screws
- shackles
- sheaves
- turnbuckles
- wire and synthetic slings

Preparations include:

- cargo gear record book entries
- checking safe working load of equipment
- establishing communications
- identifying hazards
- identifying locations of load site and destination
- planning lifting operations
- pre-operational checks
- safety devices

Hazards include the following:

- electrostatic hazards
- environmental hazards
- explosion and flammability
- extremely low temperatures
- insufficient lighting
- low temperatures
- overhead obstructions
- other personnel in area of operation
- pressure hazards
- reactivity and corrosion

- Hazard control procedures include one or more of the following:
- source of ignition
 - toxicity
 - vapour leaks and clouds
 - weather conditions
 - anti-static measures
 - atmospheric control
 - cargo inhibition
 - checking compatibility
 - confined space entry precautions
 - correct use of safety data sheet (SDS)/material safety data sheet (MSDS) information
 - ensuring operation is visible to operator at all times or a watchperson is utilised to ensure a lift is monitored at all times
 - gas testing
 - identifying hazards and assessing risks of the operation
 - inerting, drying and monitoring techniques
 - inspecting equipment and record books before commencing operations
 - providing adequate lighting
 - segregation of cargo
 - ship/shore checklist
 - ventilation
 - wearing appropriate protective clothing

Unit Mapping Information

This unit replaces and is equivalent to MARC3006A Operate deck machinery, cargo handling gear and equipment on a vessel.

MARC3006A replaces and is equivalent to TDMMR3407B Operate deck machinery.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>