



Australian Government

MARN017 Assist with marine towage operations

Release: 1

MARN017 Assist with marine towage operations

Modification History

Release 1. This is the first release of this unit of competency in the MAR Maritime Training Package.

Application

This unit involves the skills and knowledge required to assist with marine towage operations.

This unit applies to people working in the maritime industry in the capacity of:

- a crew person assisting with marine towage operations
- Engineer
- Master.

Before undertaking this unit, persons will need to have obtained Skill Set in:

- MARSS00033 Safety Training Certification Skill Set, or equivalent units of competency, or relevant Australian Maritime Safety Authority (AMSA) certificate of competency

or

- MARSS00008 Shipboard Safety Skill Set, or equivalent units of competency, or relevant AMSA certificate of competency.

Licensing/Regulatory Information

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

Pre-requisite Unit

Not applicable.

Competency Field

N - Seamanship

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 Prepare for towing operations

- 1.1** Marine towage plans, Safety Management System (SMS), tasks and work requirements provided are confirmed with appropriate personnel
- 1.2** Clarification is sought from appropriate personnel when any instruction or workplace procedure is not understood
- 1.3** Relevant towage equipment and vessel certificates and records are identified and accessed as required
- 1.4** Appropriate personal protective equipment (PPE) is selected and worn according to the SMS
- 1.5** Equipment, gear and lines for towage are located and checked in accordance with marine towage plan, instructions, workplace procedures and safe work practices
- 1.6** Equipment, gear and lines are set up for operations in accordance with marine towage plan, instructions, workplace procedures and safe work practices
- 1.7** Deck space is prepared in accordance with instructions, workplace procedures and safe work practices

2 Follow safety and hazard control procedures for safe towage operations

- 2.1** Routine pre-operational checks are carried out on equipment and machinery according to checklists, instructions, workplace procedures and safe work practices
- 2.2** Maintenance of towage equipment and gear is performed according to checklists, instructions, workplace procedures and safe work practices
- 2.3** Risk is assessed and hazard control measures for the safe handling of towage equipment and gear is applied according to instructions, workplace procedures and safe work practices
- 2.4** Faults or damage to equipment and gear are reported immediately to the appropriate person in accordance with instructions, workplace procedures and safe work

		practices
3 Communicate with others during marine towage operations	3.1	Communication is maintained with personnel during towage operations at all times and in accordance with instructions, workplace procedures and safe work practices
	3.2	Appropriate methods are used to communicate with personnel during towage operations at all times and in accordance with instructions, workplace procedures and safe work practices
4 Conduct marine towage operations	4.1	Safety on deck is maintained during towage operations at all times in accordance with instructions, workplace procedures and safe work practices
	4.2	Towage lines are secured in accordance with instructions, workplace procedures and safe work practices
	4.3	Towage lines are adjusted as directed by the Master
	4.4	Towage equipment and gear is operated in accordance with instructions, workplace procedures and safe work practices
	4.5	Situational awareness when working on deck, including danger zones and snap back zones, is maintained at all times
	4.6	Towage equipment malfunction and faults encountered during operations are promptly addressed or reported
	4.7	Towage line tension and abnormalities are identified and reported to appropriate personnel
	4.8	Towage operations are carried out safely according to instructions, workplace procedures and safe work practices
	4.9	Working load limit (WLL) of towage lines and equipment are not exceeded and are maintained within acceptable limits at all times
5 Follow emergency procedures	5.1	Instructions are acknowledged and followed in accordance with emergency procedures
	5.2	PPE is selected and used according to instructions and emergency procedures

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| | 5.3 | Communication with personnel is maintained at all times during an emergency |
| 6 Complete marine towage operations | 6.1 | The tow is disconnected in accordance with instructions, workplace procedures and safe work practices |
| | 6.2 | Towage equipment and gear is recovered and stowed in accordance with instructions, workplace procedures and safe work practices |
| | 6.3 | Towage equipment, machinery and gear are inspected during recovery and faults and damage are reported immediately to the appropriate person in accordance with instructions, workplace procedures and safe work practices |

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 may be found in the MAR Maritime Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This is a new unit. No equivalent unit.

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 MARN017 Assist with marine towage operations

Modification History

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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:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices
- applying risk assessment and hazard control strategies as directed
- communicating with other workplace personnel using:
 - hand signals
 - handheld radio
 - standard maritime vocabulary
- operating towage equipment, gear and machinery including winches, handling lines and tow lines in accordance with workplace procedures, instructions and safe work practices
- participating in risk assessment in accordance with workplace procedures, instructions and safe work practices
- reading and interpreting written information relevant to work tasks in accordance with marine towage plan
- reporting and/or rectifying hazards or safety incidents in accordance with workplace procedures
- using personal protective equipment (PPE) in accordance with workplace procedures
- working safely and collaboratively with others
- working safely near danger zones and snap back zones in accordance with workplace procedures and as directed.

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:

- communication techniques and hand signals used during towing operation
- documentation and records, including:
 - checklists
 - workplace procedures
- hazards and dangers, including:

- adverse weather and sea conditions
- bight of a line
- connecting (making fast) and letting go (casting off) lines
- dangers of handling of towage equipment and gear
- dangers zones, deck space and snap back zones
- faulty, damaged or malfunctioning equipment and gear
- girding/girting
- line tension, variation in line tension and abnormalities
- towlines, selecting and adjusting towlines including:
 - lengthening towing line
 - movement of tow line
 - positioning of tow line
 - shortening towage line
 - tow line failure
 - working line failure
- use of coupling equipment to couple and uncouple tow
- operation of handheld radio
- PPE used during towing operations and emergency situations, including:
 - immersion suits
 - lifebuoy
 - lifejackets
 - personal locating beacons (PLB)
 - portable lights
 - radiocommunication equipment
 - wet weather protection
- working load limit (WLL)/safe working loads (SWL) of lines and equipment
- towage equipment and gear, including:
 - bitts:
 - bitts for low stress tasks
 - bitts for towage
 - bridles
 - capstan
 - chafing gear
 - emergency release system
 - emergency towage rigging
 - emergency towage equipment
 - hooks
 - hydraulic systems such as shark jaws
 - rings
 - ropes

- shackles
- surge pendant
- thimbles
- towing hooks and arrangements
- towage fittings
- towage lines including:
 - gob lines
 - working lines
- towage attachment
- towing pendant
- towing pins
- towing winch brakes
- winches
- wires
- towing operations, including:
 - characteristics of towing operations including:
 - emergency
 - in-harbour
 - off shore
 - characteristics and features of item to be manoeuvred
 - characteristics of towing configurations including:
 - active escort and passive escort
 - bow towing
 - hiping up
 - pushing
 - stern tow
 - purpose of a towing plan
- vessel strong points used for emergency towing
- Safety Management System (SMS), workplace procedures and standard operating procedures for marine towage operations, including reporting of non-conformances with the SMS system.

Assessment Conditions

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

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.

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 replicate workplace conditions.

Resources for assessment must include access to:

- a vessel capable of conducting marine towage operations
- applicable documentation, such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- tools, equipment, machinery, materials and relevant PPE currently used in industry.

Links

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