



Australian Government

MARC032 Perform dogging on board a vessel

Release: 1

MARC032 Perform dogging on board a vessel

Modification History

Release 1. New unit of competency.

Application

This unit involves the skills, knowledge required to apply slinging techniques, to select and inspect lifting gear and/or direct crane/operator in moving a load.

This unit applies to an Integrated Rating or Able Seafarer-Engine/Deck who applies safe work practices when undertaking basic dogging 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 Plan job

PERFORMANCE CRITERIA

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

- 1.1 Relevant site information is obtained for related task
- 1.2 Sea conditions and use of taglines are assessed in line with shipboard best practice
- 1.3 Hazards and potential hazards associated with slinging and directing loads are identified
- 1.4 Hazard control measures consistent with appropriate standards are identified to ensure safety of personnel and

		equipment
	1.5	Weight, dimensions and load centre of gravity are identified and assessed
	1.6	Suitable lifting/sliding points on load are established
	1.7	Appropriate lifting equipment needs are assessed, including rig/vessel crane limitations
	1.8	Appropriate communication methods are established in consultation with crane/operators and other appropriate personnel
	1.9	Manufacturer specifications/information is obtained for special loads as required
2	Select and inspect equipment	
	2.1	Lifting equipment appropriate to task is selected and inspected for serviceability
	2.2	Damaged or excessively worn lifting equipment is identified, labelled and isolated
	2.3	Appropriate communications equipment is selected and its serviceability is checked
	2.4	Appropriate personal protective equipment (PPE) is selected and checked
3	Prepare site and equipment	
	3.1	Hazard prevention/control measures are applied consistent with appropriate standards to ensure safety of personnel and equipment
	3.2	Clear communications and roles of deck crew are established when working cargo with a rig crane or another vessel
	3.3	Appropriate slinging method is selected
	3.4	Lifting equipment is prepared and assembled as required
	3.5	Load destination is prepared
4	Perform tasks	
	4.1	Knots, hitches and bends using fibre and synthetic ropes are correctly made and used in course of deck operations
	4.2	Eye splices and short splices are made in fibre and synthetic ropes according to established nautical practice
	4.3	Lifting equipment is attached and secured to lifting hook using appropriate techniques

- 4.4 Lifting hook is positioned over load centre of gravity
 - 4.5 Lifting equipment is attached and secured to load in an appropriate manner
 - 4.6 Tag line is attached and secured as required
 - 4.7 Test lift is conducted to ensure load security
 - 4.8 Load is moved, and stability and control are maintained at all times
 - 4.9 Appropriate communication methods and communication signals are applied to safely coordinate load movement within sight and out-of-sight of ship's crane operator
 - 4.10 Loads are correctly rigged using appropriate ropes and rigging gear according to procedures and shipboard safety requirements
 - 4.11 Load is landed to ensure it is stable and secure from movement, is in position to be lashed with appropriate consideration given to effects of vessel's motion on stowed cargo when lashing cargo
- 5 Shut down job, clean up and maintain equipment**
- 5.1 Lifting equipment is removed or disconnected from load and prepared for next task or storage.
 - 5.2 Unserviceable lifting equipment is inspected and rejected
 - 5.3 Defective equipment is isolated and tagged
 - 5.4 Lifting equipment is stored according to procedures and appropriate standards
 - 5.5 Hazard prevention/control measures are removed as required
 - 5.6 Excess materials from work area are removed as required
 - 5.7 Defects are reported and recorded according to shipboard practices and procedures, and appropriate action is taken
 - 5.8 Rope, wire and cables are stowed and maintained according to company procedures and manufacturer instructions

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.

Hazards include one or more of the following:

- insufficient lighting
- other specific hazards (such as trip hazards, heights, radio interference)
- shipboard specific equipment in load path (such as fire monitors, ship cranes, winches)
- traffic (such as pedestrians, plant)
- weather (such as wind, lightning, storms)

Lifting equipment includes one or more of the following:

- blocks
- beam clamps
- chains
- eyebolts
- fibre ropes
- grabs
- hoists
- hooks
- lifting beams
- pallet forks and cages
- personnel boxes
- plate clamps
- spreaders
- shackles
- tackles
- trolleys wire ropes
- winches
- wire and synthetic slings

Cranes include one or more of the following:

- derrick cranes
- non-slewing cranes
- portal boom cranes
- slewing mobile cranes
- tower cranes (including self erecting)
- vehicle loading cranes

Appropriate personnel

- colleagues

- include one or more of the following:
- managers who are authorised to take responsibility for workplace or operations
 - supervisors
- Load destination includes one or more of the following:
- ground
 - loading platforms
 - suspended floors
 - vehicles
 - vessels
- Defective equipment includes one or more of the following:
- broken or stretched wires
 - cut/damaged fibres
 - damaged equipment
 - excessive wear

Unit Mapping Information

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 MARC032 Perform dogging on board a vessel

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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, performance criteria and range of conditions on at least one occasion and include:

- adapting to differences in vessels, equipment and standard operating procedures
- applying different methods for making temporary connections to loads using fibre and synthetic ropes
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices
- applying risk assessment and hazard control strategies, including hierarchy of control
- calculating rated capacity of lifting equipment
- communicating with other personnel through:
 - appropriate worksite protocol
 - fixed channel two-way radio
 - hand signals
 - listening
 - questioning to confirm understanding
 - signage
 - written instructions
- directing crane operators to move loads in a safe manner, using a slewing crane
- inspecting and caring for a wide range of lifting equipment to appropriate Australian Standards and/or manufacturer specifications
- interpreting rated capacity and working load limit tags
- selecting and inspecting lifting equipment, ropes and chains
- splicing natural fibre and synthetic ropes
- taking action to promptly report and/or rectify accidents, safety incidents and operational problems according to regulations and procedures
- using and maintaining ropes, wires and chains
- using communications signals including:
 - stop – hand
 - stop – whistle
 - hoist up – hand
 - hoist up – whistle

- hoist down – hand
- hoist down – whistle
- luff boom down – hand
- luff boom down – whistle
- luff boom up – hand
- luff boom up – whistle
- telescope out – hand
- telescope out – whistle
- telescope in – hand
- telescope in – whistle
- slew left – hand
- slew left – whistle
- slew right – hand
- slew right – whistle
- working safely and collaboratively with others during lifting operations on a vessel.

Knowledge Evidence

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

- appropriate mathematical procedures for estimating and measuring loads
- appropriate standards relevant to the full range of techniques for undertaking dogging activities including:
 - International Safety Management (ISM) Code safety management system (SMS) plans, procedures, checklists and instructions
 - manufacturer specifications
 - relevant WHS/OHS requirements and work practices
 - relevant Australian and International Standards and regulations
 - vessel and company procedures
- hierarchy of hazard identification and control:
 - elimination
 - substitution
 - isolation
 - engineering controls
 - administrative controls
- load stability and safety factors in line with manufacturer specifications
- personal protective equipment (PPE)

- procedures for splicing natural fibre and synthetic ropes
- site information including:
 - deck conditions (even, uneven, steel, wood)
 - local conditions such as access and egress
 - sea conditions
 - work method statements
- types of cranes and their functions
- types of knots, bends and hitches in common use, their characteristics, applications and limitations, and methods of tying them using synthetic and fibre rope of varying construction and size
- types of lifting equipment and slinging techniques, and their limitations and performance in a wide range of conditions (including slings, beams, accessories, clamps, work-boxes, bins and pallets).

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

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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 this is not available, assessment must occur in a simulated workplace operational situation that replicates workplace conditions.

Resources for assessment include access to:

- a suitable range of dogging, lifting and cargo lashing exercises, case studies and associated resources
- communications equipment including:
 - bells
 - fixed channel two-way radio
 - whistles
- PPE including:
 - gloves
 - hard hat
 - high visibility clothing
 - reflective vest

- safety boots
- relevant and appropriate materials, tools, and equipment that replicates and is currently used in industry for working aloft and over the side including:
 - a range of power and manually operated lifting gear
 - chains, shackles and slings
 - clamps, blocks, eye bolts, turnbuckles, terminators
 - gantlines
 - lifting and rigging ropes and hardware
 - safety harnesses
 - stage
- relevant breathing, hearing, sight, skin and sun protection.

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