

Title	Operate a land-based crane in a marine application		
Level	3	Credits	20

Purpose	<p>This unit standard is for people working in a commercial seafood operation.</p> <p>People credited with this unit standard are able to: identify hazards during a lift using a land-based crane in a marine application, and describe action to take to manage unexpected spillage; prepare a land-based crane and lifting gear for use in a marine application; transfer a seafood vessel load using a land-based crane; and secure a land-based crane used in a marine application, stow lifting equipment and complete documentation.</p>
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Classification	Seafood > Seafood Vessel Operations
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Available grade	Achieved
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Guidance Information

- 1 All evidence presented in this unit standard must be in accordance with:
 - Workplace procedures;
 - Approved Code of Practice for Cranes, and/or the Approved Code of Practice for Load lifting Rigging and/or the LEENZ Code of Practice for the Safe Use of Lifting Equipment;
 - Crane Safety Manual, available from <http://shop.cranes.org.nz/>;
 - Hazardous Substances and New Organisms Act 1996;
 - Health and Safety at Work Act 2015;
 - Maritime Transport Act 2013;
 - Resource Management Act 1991;
 - and any subsequent amendments.

- 2 Definitions

Crane has the same meaning as given in the Health and Safety in Employment (Pressure Equipment, Cranes, and Passenger Ropeways) Regulations 1999, and in this unit standard is limited to equipment with current certification used in a marine application, such as hydraulic knuckle boom cranes, winch operated fixed and sliding boom cranes, and lifting appliances.

Marine application refers to a crane being used to transfer loads to or from a vessel on the water.

Vessel refers to a vessel that is operating a Maritime Operator Safety System (MOSS) that is recognised by Maritime New Zealand and meets the requirements of the Maritime Transport Operator Certificate and/or Plan.

Vessel load may include any product or item usually loaded onto or off of the vessel. *Workplace procedures* refer to the policies and procedures set out in a verbal or written form by the employer or organisation. Procedures must be consistent with current legislative requirements and manufacturer's recommendations or instructions where relevant.

Outcomes and performance criteria

Outcome 1

Identify hazards during a lift using a land-based crane in a marine application, and describe action to take to manage unexpected spillage.

Performance criteria

- 1.1 Identify and deal with any hazards and potential hazards in the lifting environment.
- Range hazards and potential hazards may include but are not limited to – vehicles, equipment, weather, wharf conditions, overhead power lines, overhead service lines, buildings, structures, unauthorised people, winch ropes, holds, hatch covers; evidence of five hazards and/or potential hazards is required.
- 1.2 Identify hazards and potential hazards related to the performance of a crane and its suitability for a lift and plan the lift to ensure a safe lifting operation.
- Range capacity, reach, working order, rigging, hook certification, vehicle stability, outrigger configurations, structural damage, tipping axis, operating radius.
- 1.3 Identify hazards and potential hazards that may influence a lift and external factors that may influence vessel movement and plan the lift with vessel operator to minimise vessel movement throughout.
- Range hazards and potential hazards may include but are not limited to – swell, wind, waves, external vessel wakes, comparative size of load to vessel mass; evidence of two is required.
- 1.4 Identify hazards and potential hazards related to load insecurity and take measures to maintain load security during a lift.
- Range drums, leaking containers, damaged boxes or bags, use of cages, plastic wrap loose product.
- 1.5 Describe the action to be taken to manage unexpected spillage.
- Range liquids, hazardous solids.

Outcome 2

Prepare a land-based crane and lifting gear for use in a marine application.

Performance criteria

2.1 Inspect the crane and lifting gear for defects.

Range cracks, wear, rust, stretch damage to structure and wire ropes, hydraulic leaks and hose abrasions, hooks and slings, vehicle stabilisers.

2.2 Carry out pre-operating check of crane controls.

Range pump engagement, control levers, hydraulic supply, automatic cut outs.

2.3 Set up the crane and check the lift path.

Range lift path clear access, clear of obstacles; crane set up adequate reach and capacity, communication procedures tested, outriggers deployed where relevant.

Outcome 3

Transfer a vessel load using a land-based crane.

Performance criteria

3.1 Calculate the load weight and confirm as below the safe working load of all components of the lifting system.

Range includes but is not limited to – regular load calculation, single point lift, multi leg lift, effect of outrigger's configuration on the capacity of mobile cranes.

3.2 Select correct lifting equipment.

Range may include but is not limited to – chains and fittings, wire rope slings, nylon web slings, ropes, shackles; evidence of two is required.

3.3 Confirm all personnel are in the correct position prior to beginning the lift and follow directions using hand signals or radio.

Range hand signals are clear and visible at all times, all personnel are strategically placed (signalman/dogman), operations are stopped immediately if signals misunderstood.

3.4 Sling the load.

Range load balance, set up of crane, length of wire rope used, tag lines, protection of environment.

3.5 Transfer the load smoothly, free of attachments and restraints.

Range lift, slew, land.

Outcome 4

Secure a land-based crane used in a marine application, stow lifting equipment and complete documentation.

Performance criteria

4.1 Position, stow and secure the crane.

4.2 Stow the lifting equipment.

4.3 Document the crane and lifting equipment condition.

Planned review date	31 December 2028
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	24 June 2002	31 December 2019
Review	2	18 December 2006	31 December 2019
Review	3	11 December 2009	31 December 2019
Review	4	24 January 2019	N/A
Rollover	5	29 February 2024	N/A

Consent and Moderation Requirements (CMR) reference	0123
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact the Muka Tangata - People, Food and Fibre Workforce Development Council qualifications@mukatangata.nz if you wish to suggest changes to the content of this unit standard.