

Title	Operate ship's swinging derrick		
Level	3	Credits	6

Purpose	People credited with this unit standard are able to: describe factors affecting the operation of a ship's swinging derrick; prepare for cargo operations with a ship's swinging derrick; control and move loads with a ship's swinging derrick; and park and shut down a ship's swinging derrick.
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Classification	Stevedoring and Ports Industry > Port Machinery Operations
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Available grade	Achieved
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Prerequisites	Unit 20054, <i>Carry out signalman duties for cargo operations</i> , or demonstrate equivalent knowledge and skills.
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Guidance Information

- 1 Compliance requirements include but are not limited to - Health and Safety in Employment Act 1992, General Harbour (Safe Working Load) Regulations 1982, General Harbour (Ship, Cargo, and Dock Safety) Regulations 1968, and *Approved Code of Practice for Load Lifting and Rigging* available at <http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items/acop-load-lifting-rigging>.
- 2 Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- 3 Definitions
Company policies and procedures refers to relevant workplace documents which are current and accessible to candidates, trainers, and assessors, and which comply with legal requirements.
Hazards refers to situations and conditions presenting actual or potential risk including but not limited to - risk of harm to persons and/or environment, risk of damage to property and/or process, and exposure to financial loss.
Light loads are those which do not cause the vessel to roll sufficiently to cause a swing.
Heavy loads are those which may cause the vessel to roll sufficiently to cause a swing.
- 4 Personal protective equipment must be used throughout operations in accordance with company policies and procedures.

Outcomes and performance criteria

Outcome 1

Describe factors affecting the operation of a ship's swinging derrick.

Performance criteria

- 1.1 Description identifies ship's swinging derrick components and their functions.
- Range masthead span block, derrick heel lead block, derrick head cargo block, goose neck, wires and guys, winches, spider band, emergency stop button.
- 1.2 Description identifies five hazards for swinging derrick operations, and includes indicators that conditions for lifting operations are becoming hazardous once operations are underway.
- 1.3 Description includes four indicators of a safe and stable load on a ship's swinging derrick.
- 1.4 Description explains box driving, minimum height of lift, effect of shock loading on swinging derrick and lifting equipment, and jib speed in luffed position and control loss when topped up tight.
- 1.5 Description includes the requirements of a final check to ensure the swinging derrick is safe to leave.

Outcome 2

Prepare for cargo operations with a ship's swinging derrick.

Performance criteria

- 2.1 Requirements of the operation are identified from briefing information provided.
- Range includes but is not limited to - cargo to be lifted, type of lifting equipment to be used, movements, person in charge.
- 2.2 A pre-operational check is completed, and any necessary corrective actions taken, in accordance with company policies and procedures.
- Range communication method/s, visual check of swing derrick and lifting equipment, swinging derrick's safe working load, hazards in operating area, swinging derrick lighting.

- 2.3 Start up procedures are completed safely in accordance with operating instructions and company policies and procedures.

Range includes but is not limited to - identification of swinging derrick's controls, confirmation of operating instructions, check on operation of warning lights and operation of emergency stop, activation of mechanisms, test manoeuvres, check on operation of any attached cargo handling equipment, check on limit cut-out operations, report on gear characteristics, report on problems.

Outcome 3

Control and move loads with a ship's swinging derrick.

Performance criteria

- 3.1 Light loads are moved to and from wharf and vessel smoothly and with minimal sway, using straight lift.

Range trial lift, cargo movements, coordination with cargo handlers and signalman.

- 3.2 Heavy loads are moved to and from wharf and vessel smoothly and with minimal sway.

Range trial lift, cargo movements, coordination with cargo handlers and signalman.

- 3.3 Ability to kill a swing is demonstrated.

- 3.4 Following signalman's directions only, with no line of sight to pick up and put down positions, a load is moved. Movements include a stop to signalman's direction with load at halfway position.

- 3.5 A load is lifted to fit into available space to ship's requirements.

Range raising or lowering of derrick, load kept level, load rotation.

- 3.6 Coordination and communication with personnel is maintained throughout operations in accordance with company policies and procedures.

- 3.7 Load movements are carried out in a safe and efficient manner, without risk of damage to crane, lifting equipment, cargo, vessel, and wharf, and without harm to people.

Outcome 4

Park and shut down a ship's swinging derrick.

Performance criteria

- 4.1 Swinging derrick is temporarily parked and shut down in accordance with operating instructions and company policies and procedures.
- 4.2 Swinging derrick is parked and completely shut down in accordance with operating instructions and company policies and procedures.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 July 2003	31 December 2022
Rollover and Revision	2	17 September 2015	31 December 2022
Review	3	29 July 2021	31 December 2022

Consent and Moderation Requirements (CMR) reference	0145
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.