

<b>Title</b>	<b>Operate a ship's union purchase in a port environment</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>6</b>

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

- Legislative and regulatory requirements relevant to this unit standard include – Health and Safety at Work Act 2015;  
*Approved Code of Practice for Health and Safety in Port Operations*, available at [Health and safety in port operations | WorkSafe](#);  
*New Zealand Port and Harbour Marine Safety Code*, available at [New Zealand Port and Harbour Marine Safety Code - Maritime NZ](#);  
*Approved Code of Practice for Load Lifting and Rigging*, available at <http://www.worksafe.govt.nz>.
- 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.
- Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with company requirements, legislative requirements and regulatory requirements.
- Definitions  
*Company requirements* refer to instructions to staff on policy and procedures that are available in the workplace. These requirements may include – company policies and procedures, work instructions and legislative 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.

*Operating instructions* refer to best available instructions such as manufacturer's instructions and/or instructions of the person in charge.

*Regulatory requirements* refer to regulations set by but not limited to the New Zealand Customs Service, Ministry for Primary Industries and WorkSafe New Zealand.

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## Outcomes and performance criteria

### Outcome 1

Describe factors affecting the operation of ship's union purchase in a port environment.

#### Performance criteria

- 1.1 Ship's union purchase components and their functions are described.
- Range masthead span block, derrick heel lead block, derrick head cargo block, standing guy, goose neck, span wire, winches, spider band, emergency stop button, preventer, shackles, securing points, guy wire, midship guy, topping lift stopper, monkey face.
- 1.2 Hazards for union purchase operations, and indicators that conditions for lifting operations are becoming hazardous once operations are underway are described.
- Range evidence of five hazards are required.
- 1.3 Indicators of a safe and stable load on a ship's union purchase are described.
- Range evidence of four indicators are required.
- 1.4 Box driving, minimum height of lift, effect of shock loading on union purchase and lifting equipment, and maximum 120° runner angle are described.

### Outcome 2

Rig up ship's union purchase in a port environment.

#### Performance criteria

- 2.1 Union purchase is rigged up to suit cargo operations.
- Range locking cap checked to be off derrick crutch, topping span wire secured to winch drum and clutch locking pin secured, all controls checked to be in neutral before starting pump, position of emergency stop checked, power supply to winches started, derrick lifted to required height and positioned for cargo operations, guy wires and preventers checked to be free, guy wires and preventers secured to suit cargo operations, topping span secured, topping lift wire released from drum end and dog in and secured to winch drum.

2.2 The first lift is stopped at halfway and midship guy tightened.

### **Outcome 3**

Prepare for cargo operations with ship's union purchase in a port environment.

#### **Performance criteria**

- 3.1 Requirements of the operation are identified from briefing information provided.
- Range cargo to be lifted, movements, person in charge.
- 3.2 A pre-operational check is completed, and any corrective actions taken.
- Range communication method/s, visual check of union purchase rig and lifting equipment, union purchase's safe working load, hazards in operating area, ship's lighting, weather conditions.
- 3.3 Start up procedures are completed.
- Range identification of union purchase's controls including any pump room controls, confirmation of operating instructions, check guy wires and preventers are correctly set, check on operation of warning lights and operation of emergency stops, activation of mechanisms including coordination with any pump room controls, check on winch motor and brake, test manoeuvres, report on gear characteristics, report on problems.

### **Outcome 4**

Control and move loads with ship's union purchase in a port environment.

#### **Performance criteria**

- 4.1 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.
- 4.2 Ability to kill a swing is demonstrated.
- 4.3 Load is moved following signalman's directions only, using a cargo frame or tray, with no line of sight to pick up and put down positions and movement includes a stop to given hand signal with load at halfway position.
- 4.4 A load is kept level and moved to fit into available space.
- Range wharf to vessel, vessel to wharf.

- 4.5 Coordination and communication with personnel is maintained throughout operations.
- 4.6 Load movements are carried out in a safe and efficient manner, without risk of overloading union purchase, damage to lifting equipment, cargo, vessel, and wharf, and without harm to people.

## Outcome 5

Park and shut down ship's union purchase in a port environment.

## Performance criteria

- 5.1 Union purchase is temporarily parked and shut down.
- 5.2 Union purchase is parked and completely shut down.

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<b>Planned review date</b>	31 December 2024
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## Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 July 2003	31 December 2023
Rollover and Revision	2	17 September 2015	31 December 2023
Review	3	24 February 2022	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0014
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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 Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council [qualifications@hangaarorau.nz](mailto:qualifications@hangaarorau.nz) if you wish to suggest changes to the content of this unit standard.