

40757**Operate heavy machinery to lift, shift and place cargo**

Kaupae Level	3
Whiwhinga Credit	15
Whāinga Purpose	<p>This skill standard is intended for people who want to learn to start up, operate, shut down and demonstrate operator maintenance checks, for heavy machinery. These machines are used in several sectors, including logistics and warehousing in addition to the port environment.</p> <p>This skill standard can be used in programmes leading to the New Zealand Certificate in Port Operations (Level 3) with strands in Port Administration, Cargo Handling, and Heavy Machine Operation [Ref: 5256].</p>
Whakaakoranga me mātua ōti Pre-requisites	<p>Learners in a port environment must hold unit standard 28902: <i>Demonstrate knowledge of faults and the preparation required to operate heavy port machinery</i>, and unit standard 28903: <i>Demonstrate knowledge of the safe operation of heavy port machinery</i>, before being assessed against this skill standard.</p> <p>Learners not in a port environment must demonstrate equivalent skills and knowledge appropriate to their industry.</p>

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Describe the safe operating features of heavy machinery.	a. Explain the features of the machinery including the machine controls and their functions.
	b. Identify and explain environmental factors that impact on the operation and safety of the machinery.
	c. Explain the safe working load limit of the machine.
	d. Describe how to respond to a breakdown or emergency.
	e. Outline the operational area, traffic management plan and the storage position of the machine.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
2. Prepare to operate heavy machinery.	a. Complete checks including a visual check of the immediate area, pre-operational checks, maintenance checks and checks of gauges and warning devices.
	b. Establish communications with other personnel involved in the operation.
	c. Complete start-up procedures.
3. Operate heavy machinery	a. Complete a visual check before starting operations.
	b. Monitor gauges and warning lights and respond appropriately.
	c. Operate the machine to lift, shift or place cargo to and from designated positions.
	d. Maintain operational communication with other personnel including receiving and acknowledging cargo details and movement data using a data or electronic management system or radio.
	e. Report any hazards.
4. Shut down heavy machinery	a. Place the machine in a safe position in preparation for shut down.
	b. Shut down the machinery.
	c. Shut down and isolate or secure the power source.
	d. Carry out machine operator maintenance checks and follow reporting requirements.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

Assessment specifications:

This standard is for operating heavy machinery that exceeds 10 tonne working load capacity.

Evidence is required for one machine type.

Competence in this standard is not a licence to operate. Machine specific licencing and induction is required.

All tasks must be completed in accordance with company requirements.

For Assessment Criterion 1b, factors identified must include surface, weather, visibility, obstructions, other area users, machine capabilities, load and speed limits.

Definitions

Attachment refers to forks, a side lifter, a top lifter, or other means of holding the load, whether removable or an integral part of the lift truck.

Cargo includes but is not limited to ISO Intermodal shipping containers, non-ISO containers, or break-bulk loads in excess of 10000kg.

Company requirements refers 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.

Heavy machinery refers to powered, moveable machinery designed to lift, shift or place loads in excess of 10,000kg. Examples of heavy machinery include straddle carriers, powered industrial lift trucks including heavy forklifts, lift trucks with side lifters/loaders or lift trucks with top lifter/loader, reach stackers, empty container handlers. For the purpose of this unit, it does not refer to cranes.

Operational communication refers to radio, radio data transfer (RDT) equipment, hand signals, and voice communications.

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

Ngā momo whiwhinga | Grades available

Achieved

Ihirangi waitohu | Indicative content

For all machine operation:

- Load limits.
- Machine stability requirements.
- Wind speed restrictions.
- Driving unladen correctly.
- Travelling from pick up to set down positions.
- Picking up and setting down cargo or containers accurately.
- Working within the constraints of available space.

If the machine is used for stacking:

- Picking up and setting down cargo to and from a stack.
- Placing containers neatly on top of other containers.
- Safe blockstacking technique (stacking and de-stacking).
- Keeping the cargo stack stable and aligned at all times in accordance with the stow plan or other instructions.

If the machine has a mast, boom and/or spreader:

- Safe attachment of the load.
- Extending and retracting the boom.
- Correctly positioning mast.
- Spreader rotation, tilt and side shift.
- Using correct spreader height.

If the machine's stability can be adjusted:

- Adjusting the level of the machine if required.
- Positioning outriggers.

If the machine is required to manoeuvre:

- Making left and right approaches that involve turns of at least 90 degrees.

Rauemi | Resources

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 <https://www.worksafe.govt.nz/>;
- Approved Code of Practice (ACOP) for Loading and Unloading Cargo, Maritime New Zealand available at New Zealand Port and Harbour Marine Safety Code, available at <https://www.maritimenz.govt.nz/media/stpfoige/approved-code-of-practice.pdf>;
- General Harbour (Ship, Cargo, and Dock Safety) Regulations 1968, available at http://www.nzlii.org/nz/legis/num_reg/ghcadsr1968463/;
- International Maritime Dangerous Goods Code, available at <http://www.imo.org>;
- Part 24a Maritime Rule, Carriage of Cargoes – Dangerous Goods, available at <https://www.maritimenz.govt.nz/rules/all-rules/maritime-rules-part-24a/>;
- local port bylaws.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Service Sector > Stevedoring and Ports Industry > Port Machinery Operations
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0014

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	26 June 2025	N/A
Kōrero whakakapinga Replacement information	This skill standard replaced unit standard 28904.		
Rā arotake Planned review date	31 December 2030		

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council at qualifications@hangaarorau.nz to suggest changes to the content of this skill standard.