

Title	Operate a wharf gantry crane for cargo exchange		
Level	3	Credits	12

Purpose	People credited with this unit standard are able to: describe factors affecting the operation of a wharf gantry crane; prepare for cargo exchange with the wharf gantry crane; carry out cargo exchange with the wharf gantry crane; and conclude operations with the wharf gantry crane.
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Classification	Stevedoring and Ports Industry > Port Machinery Operations
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Available grade	Achieved
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Entry information	
Critical health and safety prerequisites	Prerequisites: Unit 3787, <i>Demonstrate knowledge of regulatory requirements pertaining to cranes</i> ; and Unit 20053, <i>Describe care and handling of cargo lifting equipment and safe slinging of loads</i> ; or demonstrate equivalent knowledge and skills.

Explanatory notes

- 1 Compliance requirements include but are not limited to – Health and Safety in Employment Act 1992, Health and Safety in Employment (Pressure Equipment, Cranes, and Passenger Ropeways) Regulations 1999, Local Government Act 2002, regional council bylaws, manufacturer’s instructions, company policies and procedures.
- 2 Assessment
All elements are to be assessed in a workplace environment(s) or equivalent. While every assessment situation may not provide opportunity for evidence of every performance criterion, evidence may be obtained over a period of time on the job, over several assessment opportunities, or through other means such as attestation and the use of questioning
- 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.
Heavy loads are heavy as defined by crane manufacturer.

Irregular loads refers to loads which include but are not limited to the following characteristics – unequal weight distribution, irregular shape and proportions, with or without set lifting points.

4 Reference

(Inc), and its subsequent amendments. This document is available from PO Box 30 074, LOWER HUTT, telephone 04 569 9799, fax 569 6969, email info@pca.org.nz.

5 Personal protective equipment must be used throughout operations in accordance with company policies and procedures.

Outcomes and evidence requirements

Outcome 1

Describe factors affecting the operation of a wharf gantry crane.

Evidence requirements

- 1.1 Description identifies uses and limitations of wharf gantry crane attachments for cargo exchange.
- Range includes but is not limited to – ISO spreaders (telescopic, twin lift, single lift, manual), out-of-gauge frame, grab, hook.
- 1.2 Description identifies non-cargo exchange activities wharf gantry cranes are involved in.
- 1.3 Description includes communication processes and procedures.
- Range documentation, radio, hand signals, emergency.
- 1.4 Description includes response to weather and sea conditions in accordance with company policies and procedures.
- Range reading local wind speed, maximum wind strength for operations, visibility, lightning, ship movement.
- 1.5 Description includes the operating environment.
- Range ship layouts, stevedoring roles, ship personnel roles, mobile machinery operations, cargo securing systems, cargo exchange work plans.
- 1.6 Description includes hazards relating to wharf gantry crane operations, and identifies their controls under company policies and procedures.
- Range personnel, ships and all fittings (long travel and cargo operations), terminal equipment, stuck ISO container, stuck spreader, radio interference, fire and evacuation.

- 1.7 Description explains emergency stopping in terms of uses, risks, and manufacturer's instructions.
- 1.8 Description includes and explains applicable load chart/s.
- 1.9 Description explains out of service condition.
- Range boom, tie-downs (where fitted), anchors, storm pins, power supply, night lighting.
- 1.10 Description includes crane maintenance in accordance with company policies and procedures and manufacturer's instructions, and identifies who does it.

Outcome 2

Prepare for cargo exchange with the wharf gantry crane.

Evidence requirements

- 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, personnel including person in charge, any handover requirements, communication.
- 2.2 Communication procedures are established in accordance with company policies and procedures.
- Range radio, may include hand signals.
- 2.3 Visual inspection is carried out and necessary corrective actions taken, in accordance with company policies and procedures and manufacturer's instructions.
- Range structure, festoon, access, long travel clearance, storm anchors, power supply, drives and brakes, ropes and anchorages, machinery house, spreader, pulley frame, lifting attachments, anemometer, log book, fire extinguisher, derrick boom position, visibility, new hazards, tie-downs, lighting.
- 2.4 Pre-operational check and pre-travel actions are carried out in accordance with company policies and procedures and manufacturer's instructions.
- Range may include but is not limited to – spreader, twist locks, flippers, telescoping, indications lights, limit functions, brake functions, error reports, communication equipment, storm pins, anchors, tie-downs.
- 2.5 Crane is long-travelled to work position in accordance with company policies and procedures and manufacturer's instructions.

- 2.6 Boom is lowered in accordance with company policies and procedures and manufacturer's instructions.
- 2.7 Trolley travel function and limits are tested in accordance with company policies and procedures and manufacturer's instructions.

Outcome 3

Carry out cargo exchange with the wharf gantry crane.

Evidence requirements

- 3.1 Long travel is checked as accurate in accordance with company policies and procedures, and any necessary realignment is made.
- 3.2 At the beginning of each lift from the vessel the load is checked to be free in accordance with company policies and procedures.
- 3.3 Regular ISO containers are moved to and from the wharf and vessel safely, fluidly, efficiently, and with controlled swing, in accordance with company policies and procedures and manufacturer's instructions.
- 3.4 Lids are moved safely, fluidly, and with controlled swing, in accordance with company policies and procedures and manufacturer's instructions.
- 3.5 Heavy and/or irregular loads are moved to and from the wharf and vessel safely, with no or controlled swing, in accordance with company policies and procedures and manufacturer's instructions.
- 3.6 Ability to attach spreaders to poorly aligned ISO containers is demonstrated, in accordance with company policies and procedures.
- 3.7 Ability to kill a swing is demonstrated.
- 3.8 Emergency stopping is demonstrated in accordance with company policies and procedures and manufacturer's instructions.
- Range long travel, cross travel, hoist, lower.
- 3.9 Loads are placed on the vessel safely and as directed.
- Range load orientation, placement.
- 3.10 Loads are placed on the wharf safely and in accordance with company policies and procedures.
- Range load orientation, placement.
- 3.11 Coordination and communication with personnel is maintained throughout operations in accordance with company policies and procedures.

- 3.12 Damage to crane, lifting equipment, load, vessel, and wharf is avoided in accordance with company policies and procedures and manufacturer’s instructions.

Outcome 4

Conclude operations with the wharf gantry crane.

Evidence requirements

- 4.1 The trolley is positioned in accordance with company policies and procedures and manufacturer’s instructions.
- 4.2 Lifting attachment is set at specified height in accordance with company policies and procedures and manufacturer’s instructions.
- 4.3 Boom is raised in accordance with company policies and procedures and manufacturer’s instructions.
- 4.4 Crane is long-travelled to parking position in accordance with company policies and procedures and manufacturer’s instructions.
- 4.5 Crane is parked and put into out of service condition in accordance with company policies and procedures and manufacturer’s instructions.
- Range communication equipment, tie-downs (where fitted), anchors, storm pins.
- 4.6 Documentation requirements are completed in accordance with company policies and procedures and manufacturer’s instructions.
- Range may include but is not limited to – log book, fault report/s, damage report/s.

Replacement information	This unit standard replaced unit standard 3793.
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Planned review date	31 December 2020
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 January 2004	N/A
Revision	2	25 September 2006	N/A
Rollover	3	17 September 2015	N/A

Consent and Moderation Requirements (CMR) reference	0025
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact the SSB ssb@email.address if you wish to suggest changes to the content of this unit standard.