

Title	Configure a lattice boom track crawler crane to lift and place regular and irregular loads		
Level	4	Credits	25

Purpose	<p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – demonstrate knowledge of using a track crawler crane; – configure and position a track crawler crane; – lift and place regular and irregular loads with a track crawler crane; – place a track crawler crane with a lattice boom in out-of-service condition, and complete documentation; and – carry out daily and weekly safety and maintenance checks of a track crawler crane with a lattice boom.
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Classification	Cranes > Crane Operation
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Available grade	Achieved
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Prerequisite	Unit 3789, <i>Sling varied regular loads and safely direct a crane during crane operations</i> , or demonstrate equivalent knowledge and skills.
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Guidance Information

- 1 All tasks are to be carried out in accordance with the equipment manufacturer requirements, applicable company procedures, and industry good practice found in the following sources:
 - a company quality management systems;
 - b health and safety requirements and guidelines consistent with the Health and Safety at Work Act 2015;
 - c equipment manufacturer operating instructions;
 - d government and local government legislation, regulations, and bylaws;
 - e *Crane Safety Manual*, version 3.2 or higher, available from <http://shop.cranes.org.nz/>;
 - f *Approved Code of Practice for Cranes*, 2009 (3rd edition), and/or the *Approved Code of Practice for Load-lifting Rigging* available from <http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items>.
- 2 Definitions

Crane – the definition as given in the Health and Safety in Employment (Pressure Equipment, Cranes, and Passenger Ropeways) Regulations 1999.

Crane Workplace – the definition as given in Health and Safety at Work Act 2015.

Company procedures refer to instructions to staff on policy and procedures, which are documented in memo or manual format and are available in the workplace. These requirements may include but are not limited to – site specific requirements, company quality management requirements, Approved Codes of Practice and guidelines, and legislative requirements.

Industry good practice – practice that meets the requirements of the Approved Code of Practice for Cranes, Approved Code of Practice for Load-lifting Rigging, and the Crane Safety Manual.

Irregular loads have one or more of the following characteristics – unequal weight distribution, eccentric loading, irregular shape and proportions, with or without set lifting points.

Lift plan – the planning of a lift that may be in a variety of formats, in accordance with company procedures.

Regular loads have the following characteristics – uniform weight distribution; concentric loading or regular proportions; known lifting points; repetitively lifted.

Risk assessment – may include communication and documentation of a lift plan, toolbox talk, task analysis, or Job Safety Analysis.

3 Assessment

- Assessment of practice must be carried out on a track crawler crane with a lattice boom with a capacity of no less than 30 tonne.
- Assessment of knowledge must include the following types of track driven gear on cranes – fully hydraulically operated or hydraulically powered, and manual or air clutch operated.
- Assessment must be carried out in a crane workplace or other non-simulated environment. Non-simulated environment means: working with the skill sets required in authentic experience in an organisational context, with commercial competence and the expectations and possible consequences of that context.
- Evidence used for assessment against this unit standard must meet one or more of the following requirements to prove experience:
 - a. verified experiences from authorised verifier documented and observed lifts, or company documents with a minimum of 40 lifts (slinging and directing placement of load) with at least six variations of lifting operations that may include site, crane, loads, and communication methods; and
 - b. at least two irregular loads, including one in which centre of gravity is offset, must be observed by the assessor.

- 4 It is recommended that Unit 31904, *Plan and document lifts of regular and irregular loads using multiple cranes* is completed prior to assessment against this unit.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of using a track crawler crane.

Performance criteria

- 1.1 Describe hazards associated with the operation of a track crawler crane.
- Range includes but is not limited to – hazards associated with preparing to transport; transporting the crane; re-configuring of the crawler crane on site, selection and assembly of attachments including a fly jib.
- 1.2 Describe the transporting of a track crawler crane from site to site.
- Range may include – Police, New Zealand Transport Agency, local body requirements.
- 1.3 Describe the assembling and disassembling of a track crawler crane on site.
- Range includes but is not limited to – site arrival and induction processes, permit to work, access and exiting, crane platform assessment, risk assessment, establishing exclusion zones, counterweight, A-frame, boom, tracks.
- 1.4 Explain the operation of a track crawler crane.
- Range includes but is not limited to – rating charts and range diagrams, permits to work.
- 1.5 Explain the requirements for lock out and tag out processes for the track crawler crane.

Outcome 2

Configure and position a track crawler crane.

Performance criteria

- 2.1 Analyse the workplace to identify and document hazards and risks relating to the planned lift, and implement control measures so far as reasonably practicable.
- Range may include but is not limited to – vehicles, equipment, ground condition, underground services, overhead power lines, overhead service lines, trees, buildings, structures, unauthorised people, exclusion zones, wind and weather, simultaneous activities; evidence is required for at least eight different items.

2.2 Configure the track crawler crane to the optimal position to lift and place loads in accordance with the lift plan.

Range includes – configuration of blocks, safe load indicator, boom length, boom angle, parts of line, anti two-block, and establishing weight of load (before lift), counterweight, radius, computerised information, operating limits, height; may also include configuration of – outriggers, fly jib.

2.3 Configure ropes, reeving and parts of line, hook block, hook, and rigging equipment for the load to be lifted.

2.4 Carry out plant and equipment operational and safety checks.

Outcome 3

Lift and place regular and irregular loads with a track crawler crane.

Performance criteria

3.1 Complete a lift plan for the task using a track crawler crane in accordance with manufacturer's requirements and company procedures.

3.2 Communicate the tasks, hazards, roles, and responsibilities to workers assisting with the lift and other persons who may be affected in accordance with the lift plan.

3.3 Observe and check to confirm that all participants in lifting operation are ready and in position before commencing the lift.

Range may include but is not limited to – riggers, slingers, dogmen, supervisor.

3.4 Observe and check to confirm that the load is correctly attached, lift and place the load in accordance with the lift plan and customer's requirements.

Range includes – regular and irregular loads.

3.5 Travel the track crawler crane with a load on the hook in accordance with the lift plan.

Range evidence is required of travelling with at least two loads that may be regular, or irregular, or a combination.

Outcome 4

Place a track crawler crane with a lattice boom in out-of-service condition, and complete documentation.

Performance criteria

- 4.1 Put the crane into out-of-service condition and store lifting and other equipment used in conjunction with the lift.
- 4.2 Record and take action for any defects in crane and equipment.
- 4.3 Complete documentation as required.

Range may include but is not limited to – logs, records, job sheets, crane equipment inventories, maintenance requests, plant transfer sheet;
evidence is required for at least two different items.

Outcome 5

Carry out daily and weekly safety and maintenance checks of a track crawler crane with a lattice boom.

Performance criteria

- 5.1 Inspect the crane and inform the crane controller of any issues that impact the operation of the crane in accordance with safety requirements.

Replacement information	This unit standard replaced unit standard 20525 and unit standard 20526.
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Planned review date	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	15 March 2012	31 December 2018
Review	2	28 September 2017	31 December 2021
Review	3	26 September 2019	N/A

Consent and Moderation Requirements (CMR) reference	0003
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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 Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.