

<b>Title</b>	<b>Use a self-erecting tower crane to lift and place regular loads</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	<p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>– demonstrate knowledge of using a self-erecting tower crane;</li> <li>– demonstrate knowledge of self-erecting tower crane equipment and attachments;</li> <li>– slew, trolley, and hoist the self-erecting tower crane to lift and place regular loads with a self-erecting tower crane;</li> <li>– put the self-erecting tower crane into out-of-service condition, return associated equipment to storage, and complete documentation; and</li> <li>– carry out daily and weekly operator maintenance of a self-erecting tower crane.</li> </ul>
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<b>Classification</b>	Cranes > Crane Operation
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<b>Available grade</b>	Achieved
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<b>Prerequisite</b>	Unit 30072, <i>Demonstrate and apply knowledge of slinging regular loads safely</i> , or demonstrate equivalent knowledge and skills.
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## Guidance Information

### 1 Definitions

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

*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.

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

### 2 Assessment

- 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.
- Assessment must involve a minimum of two different assessor observed lifts.

- 3 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 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 or higher, available from <http://shop.cranes.org.nz/>;
  - f *Approved Code of Practice for Cranes* available from <http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items>.
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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of using a self-erecting tower crane.

#### Performance criteria

- 1.1 Demonstrate knowledge of hazards associated with the operation of a self-erecting tower crane and the purpose of a boom clash agreement.
- 1.2 Describe the procedures for putting the self-erecting tower crane in-service and out-of-service in terms of the reasons for carrying out these procedures, and the consequences of failure to carry out these procedures.
- 1.3 Identify the location of the Certificate of Inspection, and describe its function and relevance.
- 1.4 Describe the weekly crane and load limit checks and servicing requirements.

### Outcome 2

Demonstrate knowledge of self-erecting tower crane equipment and attachments.

#### Performance criteria

- 2.1 Describe the functions of critical components and equipment using lifting equipment terminology.
  - Range may include but is not limited to – brakes, ropes, sheaves, load equalisers, load indicators, limit warning devices, pallet fork, grabs, slings, spreaders, hooks, clamps, suction plates, man-cages, ropes, chains.
- 2.2 Describe procedures for the care and use of the lifting equipment.
  - Range may include but is not limited to – pallet fork, grabs, slings, spreaders, hooks, clamps, suction plates, man-cages, ropes, chains.

### Outcome 3

Slew, trolley, and hoist the self-erecting tower crane to lift and place regular loads with a self-erecting tower crane.

#### Performance criteria

3.1 Identify and control hazards.

Range may include but is not limited to – slope, stability, obstructions, field of vision, load route, other people, load hazards, remote controls, operator position, working at heights, management of the hazards of operating in a common lift area (boom clash agreement).

3.2 Confirm any person directing lifts, and the communication methods to be used during lift operation.

3.3 Put the self-erecting tower crane into in-service condition in accordance with on-site conditions.

Range on-site conditions – location of power supply, condition of remote control battery, obstructions in the slew path.

3.4 Configure the hook block in accordance with load.

Range one of – 4-falls, 2-falls.

3.5 Slew, trolley, and hoist the self-erecting tower crane to position the hook in the optimal position to lift and place regular loads.

Range height, boom position, boom angle, radius, weather conditions, location of obstructions, visibility of proposed load path.

3.6 Confirm the load as being safely and securely attached, and the operational area clear.

3.7 Lift and place the load in accordance with manufacturer's load charts and range diagrams.

### Outcome 4

Put the self-erecting tower crane into out-of-service condition, return associated equipment to storage, and complete documentation.

#### Performance criteria

4.1 Put the self-erecting tower crane into out-of-service condition.

Range obstructions in slew path, crane security, weather forecast.

- 4.2 Return lifting and other equipment used in conjunction with the lift to storage.
- 4.3 Record and take action for any defects in crane and equipment.
- 4.4 Complete documentation as required.

### Outcome 5

Carry out daily and weekly operator maintenance of a self-erecting tower crane.

### Performance criteria

- 5.1 Carry out daily and weekly crane checks and maintenance.

<b>Planned review date</b>	31 December 2022
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### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	24 September 2003	30 June 2013
Review	2	20 May 2008	30 June 2013
Review	3	15 March 2012	31 December 2018
Review	4	28 September 2017	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	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](mailto:reviewcomments@skills.org.nz) if you wish to suggest changes to the content of this unit standard.