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| Crane 13US 3795 | Configure and operate a mobile crane, lift and place regular and irregular loads  |  |

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| **Kaupae** | Level | 4 |
| **Whiwhinga** | Credit | 25 |
| **Whāinga** | Purpose | This skill standard recognises the skills to:* configure and position a mobile crane
* lift and place regular and irregular loads
* prepare for travel mode and complete documentation
* complete daily and weekly operator maintenance requirements
* complete prestart and safety checks

This skill standard aligns with the New Zealand Certificate in Cranes (Level 4) and may contribute to other programmes of study as appropriate. |
| **Whakaakoranga me mātua oti** | Pre-requisites | Crane 3 and Crane 9 are pre-requisites.Crane 16 is a co-requisite |

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

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| **Hua o te ako |** Learning outcomes  | **Paearu aromatawai** | Assessment criteria |
| 1. Configure and position a mobile crane.
 | 1. The task is analysed to identify regulatory requirements and any permits according to the task, and site.
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| 1. Lift plan created for the given task
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| 1. Workplace is analysed to identify hazards and risks related to the planned lift, and control measures are implemented.
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| 1. Crane is configured and positioned according to the lift plan.
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| 1. Ropes, reeving and parts of line, hook block, hook, and rigging equipment for the load to be lifted are configured.
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| 1. Crane is inspected and the crane controller is informed of any issues that may impact operation of the crane in line with manufacturer’s instructions or company procedures.
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| 1. Lift and place regular and irregular loads with a mobile crane.
 | 1. Tasks, hazards, roles, and responsibilities are communicated to workers assisting with the lifts and other people who may be affected, according to the lift plan.
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| 1. A check is completed to make sure workers assisting with the lifts and other people who may be affected are in their positions ready to start.
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| 1. Loads are checked for correct attachment, lifted and placed according to the lift plan and customer requirements.
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| 1. Prepare the mobile crane for road travel and complete documentation.
 | 1. Mobile crane is prepared for road travel and equipment used for the lift is stored.
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| 1. Boom is secured in travel position.
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| 1. Documentation is completed and action is taken for any defects in the crane and equipment.
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| 1. Complete daily and weekly operator maintenance of the mobile crane.
 | 1. Crane is inspected, daily and or weekly maintenance undertaken, and the crane controller is informed of any issues that impact operation of the crane.
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**Pārongo aromatawai me te taumata paearu** | Assessment information and grade criteria

Assessment specifications:

Regulatory requirements and permits may include Police, Waka Kōtahi, local body requirements, Corridor Access Request (CAR), electricity supply, telecommunications, WorkSafe New Zealand, Civil Aviation Authority, Rail Corridor Requirements.

Hazards and risks may include vehicles, equipment, ground condition, underground services, overhead powerlines, overhead service lines, trees buildings, structures, unauthorised people, exclusion zones, wind and weather, simultaneous activities.

Configuration of the crane includes blocks, outriggers, safe load indicator, boom length, anti-two-block, establishing weight of load (before lift); and may include counterweight, operating limits, fly jib.

Operational and safety checks may include the settlement test.

People who may be affected by the lift may include riggers, slingers, dogmen, supervisor.

Travel includes on road and off road.

Preparation for road travel includes understanding or demonstration of certificate of fitness (CoF) / warrant of fitness (WoF), registration applicable permits (national and regional road controlling authorities), swept path requirements, license and bridge engineering self-supervision (BESS), crane configuration, driving on road.

For the assessment:

* Cranes that can be used include truck mounted cranes, all terrain cranes, rough terrain cranes.
* A minimum of 40 lifts (slinging and directing placement of the load) must be observed and documented by an authorised verifier, with at least six variations of lifting operations that may include site, crane, loads, and communication methods; and
* At least two regular and two irregular loads, including one where centre of gravity is offset, and one blind lift must be observed by the assessor.

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

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

*Lift plan* refers to the planning of a lift that may be in a variety of formats.

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

**Ngā momo whiwhinga** | Grades available

Achieved.

**Ihirangi waitohu** | Indicative content

* Hazards associated with operation of a mobile crane.
* Roading and traveling of a mobile crane (assembling and checking required equipment, authorisation to use equipment, pre-start checks and service, fault reporting.
* Set up of a mobile crane onsite (site arrival and induction processes, permit to work, access and exit, crane platform assessment, risk assessment, establishing exclusion zones).
* Operation of a mobile crane (rating charts, range diagrams).
* Lock-out and tag-out requirements for mobile cranes.

**Rauemi |** Resources

Crane Programme Guidance, available from qualifications@waihangaararau.nz.

Approved Code of Practice for Cranes, available from [www.worksafe.govt.nz](http://www.worksafe.govt.nz).

Crane Safety Manual: For Crane Operators & Dogmen (Crane Association of New Zealand), available from [www.cranes.org.nz](http://www.cranes.org.nz).

**Pārongo Whakaū Kounga |** Quality assurance information

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| **Ngā rōpū whakatau-paerewa |** Standard Setting Body | Waihanga Ara Rau Construction and Infrastructure Workforce Development Council |
| **Whakaritenga Rārangi Paetae Aromatawai |** DASS classification | Service Sector > Cranes > Crane Operation |
| **Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga |** CMR | 0025 |

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| **Hātepe |** Process | **Putanga |** Version | **Rā whakaputa |** ReviewDate | **Rā whakamutunga mō te aromatawai |** Last date for assessment |
| **Rēhitatanga |** Registration | 1 | dd mm 2024 | N/A |
| **Kōrero whakakapinga |** Replacement information | N/A |
| **Rā arotake |** Planned review date | 31 December 2029 |

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihangaararau.nz to suggest changes to the content of this skill standard.