



Australian Government

TLILIC0012 Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit specifies the skills and knowledge required to safely operate a vehicle loading crane with a capacity of 10 metre tonnes or more

Vehicle loading crane means a crane mounted on a vehicle for the purpose of loading and unloading the vehicle.

This unit applies to the activities of a person operating a vehicle loading crane with a capacity of 10 metre tonnes or more, and includes applying load estimation and slinging techniques to move a load.

A person performing this work is required to hold a vehicle loading crane high risk work (HRW) licence.

This unit requires a person operating vehicle loading crane to plan the work, conduct routine checks, set up the crane, shift loads in a safe manner and safely shut down and secure the crane.

Licensing/Regulatory Information

This unit is based on the licensing requirements of Part 4.5 of the Model Work Health and Safety (WHS) Regulations, HRW and meets Commonwealth, state and territory HRW licensing requirements.

Any alteration to this unit would result in a unit that would not be acceptable to work health and safety (WHS)/occupational health and safety (OHS) regulators for the purpose of licensing.

Pre-requisite Unit

Not applicable.

Competency Field

LIC – Licensing

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Plan work

- 1.1 Potential workplace hazards are identified
- 1.2 Hazard control measures are identified consistent with appropriate standards to ensure the safety of personnel and equipment
- 1.3 Weight of load is identified and estimated in consultation with associated personnel as required
- 1.4 Suitable lifting points on load are identified in consultation with associated personnel
- 1.5 Appropriate lifting equipment is obtained following consultation with associated personnel
- 1.6 Crane capabilities are appropriate to the load/s, working conditions and environmental conditions
- 1.7 Appropriate paths for moving loads in the work area are inspected and determined
- 1.8 Appropriate communication methods are identified with associated personnel

2 Conduct routine checks

- 2.1 Crane is visually checked for any damage or defects
- 2.2 All signage and labels are visible and legible in accordance with the appropriate standard.
- 2.3 Routine pre-operational crane checks are carried out in accordance with procedures
- 2.4 All controls are located and identified
- 2.5 Crane service logbook is checked for compliance
- 2.6 Crane is started in accordance with procedures and checked for any abnormal noises

- 2.7 All crane safety devices are tested in accordance with procedures
- 2.8 Post-start operational checks are carried out in accordance with procedures
- 2.9 All communication equipment is checked for serviceability
- 2.10 All damage and defects are reported and recorded in accordance with procedures, and appropriate action is taken

3 Set up crane

- 3.1 Ground suitability is checked
- 3.2 Crane is driven to work area in accordance with procedures
- 3.3 Crane is positioned for work application and stability in accordance with procedures
- 3.4 Outriggers/stabilisers are deployed and locked in accordance with manufacturer instructions, and required type and amount of padding material or plates is determined
- 3.5 Boom/jib and configuration data is input into the crane computer as required
- 3.6 Appropriate hazard prevention/control measures are applied to work area in accordance with procedures
- 3.7 All communications equipment is tested for functionality
- 3.8 Lifting equipment is prepared for load in accordance with procedures
- 3.9 Load destination is prepared

4 Transfer loads

- 4.1 Loads are determined within crane capacity
- 4.2 Boom/jib and hoist block is positioned over load following directions from associated personnel
- 4.3 Lifting equipment is attached and secured using defined techniques in accordance with procedures
- 4.4 Test lift is carried out in accordance with procedures to allow for checks to be safely made, in consultation with relevant personnel
- 4.5 Loads are transferred using all relevant crane movements in accordance with procedures and the appropriate standard
- 4.6 All required communication signals are correctly interpreted in accordance with procedures and the appropriate standard

- 4.7 Load is landed ensuring stability and security from movement
- 4.8 Lifting equipment is removed or disconnected from load and/or lifting hook in accordance with procedures
- 4.9 Crane is operated in accordance with procedures
- 4.10 Load movement is monitored constantly, ensuring safety of personnel and load, and crane stability
- 4.11 Unplanned and/or unsafe situations are responded to in accordance with procedures
- 5 Shut down and secure crane**
 - 5.1 Crane boom/jib and equipment are stowed and secured in accordance with procedures and the appropriate standard
 - 5.2 Relevant motion locks and brakes are applied as required
 - 5.3 Outriggers/stabilisers are stowed and secured in accordance with procedures
 - 5.4 Plates or packing are stowed and secured
 - 5.5 Crane is shut down in accordance with procedures
 - 5.6 Routine post-operational crane checks are carried out in accordance with procedures
 - 5.7 Lifting equipment is stored in accordance with procedures and the appropriate standards
 - 5.8 All damage and defects are reported and recorded in accordance with procedures, and appropriate action is taken

Foundation Skills

The language, literacy, numeracy and employment skills that are essential to performance that are not explicit in the unit are listed below.

Skill	Performance feature
Employment skills to:	• operate a vehicle loading crane with a capacity of 10 metre tonnes and above in different types of workplaces, transferring key principles of safe operation to different contexts • improve own performance in safely and efficiently operating a vehicle loading crane by incorporating learnings from different

Skill	Performance feature
	workplaces and different conditions into current performance
Numeracy skills to:	- interpret numerical information including: - selecting appropriate vehicle loading crane in accordance with load and workplace conditions - load weight assessment, to ensure compliance with vehicle loading crane data plate specifications - controlling and monitoring instrument readings
Language skills to:	- use and interpret vocabulary specific to vehicle loading crane operations and workplace procedures to communicate with other workplace personnel - use non-verbal feedback to support effective communication - use relevant two-way radio conventions
Literacy (reading) skills to:	- interpret documentation that includes technical specificity including: - vehicle loading crane data plate - plant operation manuals and manufacturer specifications - workplace procedures, including emergency plan - workplace signage and labels
Literacy (writing) skills to:	- accurately record and maintain information relating to operating a vehicle loading crane, including: - incident reports - vehicle checking and maintenance records
Self-management skills to:	- implement risk control measures - initiate emergency management strategies

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit is equivalent to TLILIC0012A Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above).

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLILIC0012 Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

A person who demonstrates competency in this unit must provide evidence of safely operating a vehicle loading crane with a capacity of 10 metre tonnes and above, and satisfy all of the elements, performance criteria and foundation skills requirements of the unit on at least one occasion including:

- applying appropriate mathematical procedures for estimating loads
- applying hazard prevention/control measures including:
 - adequate illumination
 - disconnecting power
 - insulated electric lines
 - moving obstructions
 - pedestrian controls
 - personal protective equipment
 - safety tags on electrical switches/isolators
 - using safety observer inside exclusion zone
 - traffic barricades and controls
 - trench covers
- applying risk assessment and hazard control strategies, including hierarchy of control as applied to positioning and safely operating vehicle loading crane
- assessing ground conditions to confirm site is suitable (e.g. firm, level and safe) to operate a vehicle loading crane
- communicating with other workplace personnel through:
 - using appropriate worksite protocols
 - bells
 - buzzers
 - listening
 - making and interpreting hand signals
 - questioning to confirm understanding
 - signage
 - two-way radios
 - verbal and non-verbal language
 - written instructions

- whistles
- complying with work health and safety (WHS)/occupational health and safety (OHS) licensing legislation
- demonstrating awareness of boom/jib movements and safe positioning of the operator for any lift
- operating a vehicle loading crane including all functions to their maximum extension when loading and unloading loads to the safe working rated capacity
- operating vehicle loading crane including all functions to their maximum extension when loading and unloading loads to the safe working rated capacity of the crane, in conjunction with other associated personnel, while applying relevant crane movements including:
 - knuckling
 - luffing
 - raising and lowering hoist
 - slewing
 - telescoping
- receiving and interpreting workplace instructions, safety information, emergency procedures
- recording and maintaining accurate information relating to crane operations
- shutting down a vehicle loading crane in accordance with manufacturer specifications and workplace procedures including:
 - folding boom/jib into the transport position
 - idling engine to stabilise temperature
 - locking and securing cabin as required
 - removing key from ignition as required
 - retracting boom/jib as required
 - retracting hoist rope and hook block
 - retracting outriggers/stabilisers
 - securing crane for travel
 - turning off engine as required
- stabilising a vehicle loading crane by:
 - correctly positioning plates or packing
 - deploying outriggers
 - establishing correct size plates or packing
- test-lifting the load just clear of the lifting plane to ensure:
 - adjustments to slinging can be made in a safe manner
 - all equipment is functioning properly
 - load measuring equipment can be used to verify calculated weight of load
 - loads of unusual shape or weight distribution are correctly slung
 - near capacity loads do not overload crane
- using and interpreting crane manufacturer specifications and data, including load charts to enable a vehicle loading crane to be configured for load

- using communications signals including:
 - stop – hand
 - stop – whistle
 - hoist up – hand
 - hoist up – whistle
 - hoist down – hand
 - hoist down – whistle
 - luff boom down – hand
 - luff boom down – whistle
 - luff boom up – hand
 - luff boom up – whistle
 - telescope out – hand
 - telescope out – whistle
 - telescope in – hand
 - telescope in – whistle
 - slew/articulate right – hand
 - slew/articulate right – whistle
 - slew/articulate left – hand
 - slew/articulate left – whistle
- using lifting equipment and basic slinging techniques suitable for loads to be loaded/unloaded as defined by workplace procedures
- verifying problems and equipment faults, and applying appropriate response procedures to unplanned and/or unsafe situations including:
 - environmental conditions (e.g. wind, lightning, storms)
 - failure/loss of control (e.g. brakes and steering)
 - failure of equipment (e.g. hydraulic system)
 - obstacles and obstructions
 - unusual or difficult terrains.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- appropriate mathematical procedures for estimating and measuring loads
- assessment of ground conditions to confirm site is suitable (e.g. firm, level and safe) to operate crane
- Australian and industry standards relevant to operating a vehicle loading crane (capacity 10 metre tonnes and above)
- boom/jib movements and particularly the safe positioning of operator for any lift
- Commonwealth, state or territory WHS/OHS legislation, standards and codes of practice relevant to the full range of processes for the crane class
- defined techniques including fixed lifting points and basic reeved slings
- ground stability including:
 - backfilled ground
 - bitumen
 - concrete
 - hard compacted soil
 - rock
 - rough uneven ground
 - soft soils
- hazards including:
 - environmental conditions (e.g. wind, lightning, storms, etc.)
 - ground stability (e.g. ground condition, recently filled trenches, slopes)
 - insufficient lighting
 - other specific hazards (e.g. dangerous materials)
 - overhead hazards (e.g. electric lines, service pipes)
 - positioning of crane operator
 - traffic (e.g. pedestrians, vehicles, other plant)
- hierarchy of control:
 - elimination
 - substitution
 - isolation
 - engineering controls
 - administrative controls
 - personal protective equipment (PPE)
- organisational and workplace standards, requirements, policies and procedures for operating the crane class
- procedures for recording, reporting and maintaining workplace records and information
- rated capacity and working load limits (including use of crane load charts)
- risks associated with overhead electric lines/electrical cables, ground conditions, wind, pedestrians and tipping
- systematic process of eliminating or reducing risk to personnel and property through the application of controls
- typical routine problems encountered, and equipment and adjustments required for

correction

- use of lifting equipment and basic slinging techniques suitable for loads to be loaded/unloaded as defined by workplace procedures
- vehicle loading crane characteristics and capabilities to allow crane configuration to suit the range of loads.

Assessment Conditions

Assessments must be conducted by an assessor accredited for this high risk work (HRW) licence class in the Commonwealth/state/territory where the licence will be obtained (i.e. an assessor authorised by a Commonwealth/state/territory WHS/OHS regulator).

As a minimum, assessors must satisfy applicable regulatory requirements, which may include requirements in the Standards for *Registered Training Organisations* current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and all assessment must be conducted in the English language.

Assessment of performance must be undertaken in the workplace and/or under realistic workplace conditions which typically reflect:

- performing tasks/activities within timelines that would be expected in a workplace
- standard and authorised work practices, safety requirements and environmental constraints
- using full-scale equipment

Vehicle loading crane (capacity 10 metre tonnes) and above operation assessment must be conducted in a working zone in accordance with state/territory arrangements.

If the working zone is located at a 'live' site, assessment should continue in all weather conditions unless the safety of the candidate or others could be compromised.

Simulators must **not** be used in the assessment of this unit of competency.

Accredited assessors are responsible for ensuring candidates have access to:

- appropriate vehicle loading crane with a capacity of 10 metre tonnes and above, and associated equipment in safe condition
- as required, appropriate personnel to sling and direct the loads including:
 - doggers
 - riggers
- communications equipment including:
 - bells

- buzzers
- two-way radios
- whistles
- controls including:
 - boom extension levers (where fitted)
 - hoisting and lowering levers
 - knuckling levers
 - luffing levers
 - slewing levers including brake
- lifting equipment including:
 - chain slings
 - eyebolts
 - shackles
 - wire and synthetic slings
- required personal protective equipment (PPE) for the purpose of the Performance Assessment
- safety devices including:
 - audible and visual warning devices
 - horns/sirens
 - lights
- signage and labels including:
 - crane decals
 - control labels
 - crane data plates/labels
 - load charts
- where appropriate, relevant workplace procedures and standards for operating a vehicle loading crane with a capacity of 10 metre tonnes and above including:
 - approved codes of practice and guidance material
 - relevant Australian Standards especially AS2550.1 Cranes, hoists and winches—Safe use (2011)
 - checklists
 - history record system for service and maintenance history
 - industry operating procedures
 - industry standards (where applicable)
 - logbook
 - manufacturer guidelines (instructions, specifications or checklists) for the purpose of the Performance Assessment
 - safe work method statement (SWMS), as required
 - service logbook.

Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>