Australian Government

Assessment Requirements for TLILIC4011 Licence to operate a slewing mobile crane (over 100 tonnes)

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.

Performance Evidence

A person who demonstrates competency in this unit must provide evidence of safely operating a slewing mobile crane over 100 tonnes 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 to estimate loads
- applying best mobile practice including:
  - boom/jib as low as possible
  - boom/jib in line with crane
  - carrying load near to ground surface
  - gently accelerating and braking (to minimise load swing)
  - facing load uphill
  - minimum boom/jib length
  - minimum speed
  - using handheld taglines
- applying hazard prevention/control measures including:
  - adequate illumination
  - disconnected power
  - insulated electric lines
  - moving obstructions
  - pedestrian barricades
  - personal protective equipment
  - using safety observer inside exclusion zone
  - safety tags on electrical switches/isolators
  - traffic barricades and control
  - trench covers
- applying risk assessment and hazard control strategies, including hierarchy of control as applied to positioning and safely operating a crane
- applying risk assessment and management procedures
- communicating with other workplace personnel through:
  - appropriate worksite protocols
  - bells

  - buzzers
  - hand signals
  - listening
  - making and interpreting hand signals
  - questioning to confirm understanding
  - signage
  - two-way radios
  - verbal and non-verbal language
  - written instructions
  - whistles
- completing the pre-operational check, positioning, stabilising, set up, operation, post-operational checks of a mobile crane including all functions to their maximum extension in lifting and moving loads to the safe working rated capacity of a slewing mobile crane over 100 tonnes capacity in conjunction with other associated personnel
- complying with WHS/OHS licensing legislation
- loading data into crane computer as required and checking operation to accurately reflect the crane configuration
- operating a slewing mobile crane over 100 tonnes capacity to lift and move loads to the safe working rated capacity while applying relevant crane movements including:
  - boom/jib up and down
  - operation of outriggers/stabilisers
  - raise and lower hoist
  - slew boom/jib
  - telescope in and out
  - travel
- receiving and interpreting workplace instructions, safety information, emergency procedures
- recording and maintaining accurate information relating to crane operations
- shutting down a slewing mobile crane over 100 tonnes capacity in accordance with manufacturer specifications and workplace procedures including:
  - idling engine to stabilise temperature
  - locking and securing cabin as required
  - positioning/securing boom/jib
  - removing key from ignition as required
  - retracting boom/jib
  - retracting hoist rope and hook block
  - retracting outriggers/stabilisers
  - securing crane for travel
  - turning off engine as required
- stabilising a slewing mobile crane by:
  - correctly positioning plates or packing

  - deploying outriggers
  - establishing correct size plates or packing
- test\--lifting load just clear of lifting plane to ensure:
  - adjustments to slinging can be made in a safe manner
  - all crane 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 crane to be configured for load including:
  - boom/jib
  - counterweights
  - fly-jib
- 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 left – hand
  - slew left – whistle
  - slew right – hand
  - slew right – whistle
  - travel – hand
- verifying problems and equipment faults, and applying appropriate response procedures to unplanned and/or unsafe situations including:
  - environmental conditions (e.g. wind, lightning, storms, etc.)
  - failure of equipment (e.g. hydraulic system)
  - failure/loss of control (e.g. brakes and steering)
  - 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
- Australian and industry standards relevant to operating a slewing mobile crane (over 100 tonnes)
- Commonwealth, state or territory WHS/OHS legislation, standards and codes of practice relevant to the full range of processes for the crane class
- crane rated capacity and lifting gear working load limits (including use of crane load charts)
- ground suitability 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
  - obstacles or obstruction
  - other specific hazards (e.g. dangerous materials)
  - overhead hazards (e.g. electric lines, service pipes)
  - traffic (e.g. pedestrians, vehicles, other plant)
  - unusual or difficult terrains
- hierarchy of hazard identification and control:
  - elimination
  - substitution
  - isolation
  - engineering controls
  - administrative controls
  - personal protective equipment (PPE)
- mobile slewing crane characteristics and *capabilities* to allow crane configuration to suit the range of loads

- organisational and workplace standards, requirements, policies and procedures for conducting operations for the crane class
- procedures for recording, reporting and maintaining workplace records and information
- risks associated with overhead electric lines/electrical cables, wind, erection, pack up and crane stability, ground conditions, crane tipping and demolition sites
- systematic process of eliminating or reducing risk to personnel and property through the application of controls
- typical routine problems encountered in the process and with equipment, and adjustments required for correction.

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.

Slewing mobile crane (over 100 tonnes) 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 slewing mobile crane over 100 tonnes in capacity and associated equipment in safe condition
- appropriate personnel to sling and direct loads including:
  - doggers
  - riggers
- communications equipment including:
  - bells
  - buzzers

  - two-way radios
  - whistles
- controls including:
  - boom extension levers (where fitted)
  - hoisting and lowering levers
  - luffing levers
  - slewing levers including brake
- required personal protective equipment (PPE) for the purpose of the Performance Assessment
- safety devices including:
  - audible and visual reversing devices
  - horns/sirens
  - lights
  - operator restraint devices
- signage and labels including:
  - crane data plates/labels
  - load charts
  - crane decals
  - control labels
- where appropriate relevant workplace procedures and standards for operating a slewing mobile crane over 100 tonnes including:
  - approved codes of practice and guidance
  - Australian Standards
  - checklists
  - history record system where service and maintenance history is kept
  - industry operating procedures
  - manufacturer guidelines (instructions, specifications or checklists) for the purposes of the Performance Assessment
  - relevant industry standards (where appliocable
  - service book
  - safe work method statement (SWMS), as required.

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851