



**Australian Government**

# **Assessment Requirements for TLILIC3007 Licence to operate a portal boom crane**

**Release: 1**

# Assessment Requirements for TLILIC3007 Licence to operate a portal boom crane

## 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 portal boom crane 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:
  - carrying load near to the ground surface (where practical)
  - gently accelerating and braking (to minimise load swing)
  - minimum boom/jib radius
  - 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
  - safety tags on electrical switches/isolators
  - using safety observer inside exclusion zone
  - 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
  - listening

- making and interpreting hand signals
- questioning to confirm understanding
- signage
- two-way radios
- verbal and non-verbal language
- whistles
- written instructions
- complying with WHS/OHS licensing legislation
- loading data into crane computer as required and checking operation to accurately reflect crane configuration
- operating a portal boom crane including all functions to their maximum for lifting and moving loads to the safe working rated capacity while applying relevant crane movements including:
  - hoisting
  - luffing
  - mobilising
  - slewing
- receiving and interpreting workplace instructions, safety information, emergency procedures
- recording and maintaining accurate information relating to crane operations
- shutting down a portal boom crane in accordance with manufacturer specifications and workplace procedures including:
  - applying motion locks and brakes as required
  - applying weathervane mode as required
  - idling engine to stabilise temperature
  - locking and securing cabin as required
  - raising boom/jib to clear buildings, structures and vessels as required
  - removing key from ignition
  - retracting hoist rope and hook block
  - turning off engine
- 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
- 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
- slew left – hand
- slew left – whistle
- slew right – hand
- slew right – whistle
- mobile – 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/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 loads
- Australian and industry standards relevant to operating a portal boom crane
- Commonwealth, state or territory WHS/OHS legislation, standards and codes of practice relevant to the full range of processes for the crane class
- hazards including:
  - environmental conditions (e.g. wind, lightning, storms)
  - ground stability (e.g. ground condition or slopes for load placement)
  - insufficient lighting
  - other specific hazards (e.g. dangerous materials)
  - overhead hazards (e.g. electric lines, service pipes)
  - traffic (e.g. pedestrians, vehicles, plant)
- hierarchy of hazard identification and control:

- elimination
- substitution
- isolation
- engineering controls
- administrative controls
- personal protective equipment (PPE)
- organisational and workplace standards, requirements, policies and procedures for conducting operations for the crane class
- portal boom crane characteristics and capabilities to allow crane configuration to suit the range of loads
- 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, access to cabin, other vehicles and clear access while travelling
- systematic process of eliminating or reducing risk to personnel and property through the application of controls
- typical routine problems encountered operating crane and 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.

Portal boom crane 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 portal boom crane and associated equipment in safe condition specified by the endorsed Assessment Instrument
- appropriate personnel to sling and direct loads including:
  - doggers
  - riggers
- communications equipment including:
  - bells
  - buzzers
  - fixed channel two-way radios
  - whistles
- controls including:
  - 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 warning devices
  - function limits
  - lights
- signage and labels including:
  - crane data plates/labels
  - crane decals
  - control labels
  - load charts
- where appropriate, relevant workplace procedures and standards for operating a portal boom crane including:
  - approved codes of practice and guidance
  - Australian Standards
  - checklists
  - industry operating procedures
  - relevant 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

Companion Volume implementation guides are found in VETNet -

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