



Australian Government

Department of Education, Employment and Workplace Relations

TLILIC608A Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)

Release: 1

TLILIC608A Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)

Modification History

Not applicable.

Unit Descriptor

This unit specifies the outcomes required to operate a mobile crane of greater than 3 tonnes capacity that incorporates a boom or jib which includes articulated type mobile cranes and locomotive cranes, but does not include vehicle tow trucks, for licensing purposes.

Application of the Unit

This unit requires the operator to plan the work, conduct routine checks, set up crane, transfer loads, mobile loads, and shut down and secure the crane.

This unit is based on the requirements of the National Standard for Licensing Persons Performing High Risk Work.

This unit in its current form meets state and territory licensing requirements. Any alteration will result in a unit which is not acceptable to regulators for the purpose of licensing.

Licensing/Regulatory Information

Refer to Application of the Unit

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Plan work	<ul style="list-style-type: none">1.1 Potential workplace hazards are identified1.2 Hazard control measures are identified consistent with appropriate standards to ensure the safety of personnel and equipment1.3 The weight of the load is identified and estimated in consultation with associated personnel1.4 Crane is appropriate to the load/s and workplace conditions1.5 The appropriate path for the movement of loads in the work area is inspected and determined1.6 Appropriate communication methods are identified with associated personnel
2 Conduct routine checks	<ul style="list-style-type: none">2.1 Crane is visually checked for any damage or defects2.2 Crane is accessed in a safe manner2.3 All signage and labels are visible and legible according to the appropriate standard2.4 Routine pre-operational crane checks are carried out according to procedures2.5 All controls are located and identified2.6 Crane service logbook is checked for compliance2.7 Crane is started according to procedures and checked for any abnormal noises2.8 All crane safety devices are tested according to procedures2.9 Pos-start operational checks are carried out according to procedures2.1 All communication equipment is checked for serviceability

- 2.1 **All damage and defects are reported and recorded according to procedures, and appropriate action is taken**
- 1
- 3 Set up crane
 - 3.1 **Ground suitability** is checked
 - 3.2 **Crane** is driven to the work area according to **procedures**
 - 3.3 **Crane** is positioned for work application and **stability** according to **procedures**
 - 3.4 Appropriate **crane configuration** for work task is determined according to **procedures** (where applicable)
 - 3.5 Boom/jib and counterweight configuration data is input into the crane computer (where applicable)
 - 3.6 Appropriate **hazard prevention/control measures** are applied to the work area according to **procedures**
 - 3.7 All **communications equipment** is tested for functionality
- 4 Transfer load
 - 4.1 Lifts are determined within the capacity of the crane
 - 4.2 Boom/jib and hoist block is positioned over load following directions from **associated personnel**
 - 4.3 **Test lift** is carried out according to **procedures**
 - 4.4 Loads are transferred using all **relevant crane movements** according to **procedures** and the **appropriate standard**
 - 4.5 All required **communication signals** are correctly interpreted according to **procedures** and the **appropriate standard**
 - 4.6 **Crane** is operated according to **procedures**
 - 4.7 Load movement is monitored constantly ensuring safety to personnel and load, and crane stability
 - 4.8 **Unplanned and/or unsafe** situations are responded to in line with **procedures**

- 5 Mobile load
 - 5.1 Suitability of **planned route** is checked for the crane according to **procedures**
 - 5.2 **Crane** is configured to mobile load according to procedures
 - 5.3 Load is moved using **best mobile practice** according to the appropriate standard
- 6 Shut down and secure crane
 - 6.1 **Crane** boom/jib and equipment is stowed and secured, where appropriate, according to **procedures** and the **appropriate standard**
 - 6.2 Relevant motion locks and brakes are applied (where applicable)
 - 6.3 Outriggers/stabilisers are stowed and secured according to **procedures** (where applicable)
 - 6.4 Crane is **shut down** according to procedures
 - 6.5 Routine post-operational crane checks are carried out according to **procedures**
 - 6.6 Plates or packing are stowed and secured (where applicable)
 - 6.7 All damage and defects are recorded and reported according to **procedures**, and appropriate action is taken

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

Accurately record and maintain information relating to crane operations
Use communication techniques in the workplace including whistles, hand signals and use of two-way radios
Use communication skills at a level sufficient to communicate with other site personnel
Assessment of ground conditions to confirm that the site is suitable (e.g. firm, level and safe) to operate crane
Operate crane including all functions to their maximum extension in the lifting and moving of loads to the safe working rated capacity in conjunction with other associated personnel
Mobile loads using best mobile practice
Apply risk assessment and hazard control strategies, including hierarchy of control as applied to the positioning and safe operation of the crane (particular awareness of the risks associated with overhead powerlines/electrical cables, ground conditions, crane tipping and demolition sites)
Use and interpret crane manufacturer's specifications and data, including load charts to enable the crane to be configured for the load
Verify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge:

Appropriate mathematical procedures for estimation and measurement of loads
Commonwealth, state or territory OH&S legislation, standards and codes of practice relevant to the full range of processes for the crane class
Ability to read and comprehend manufacturer's instructions, procedures and safety signs
Understanding of crane characteristics and capabilities (including use of load charts) to allow the configuration of the crane to suit the range of loads
Understanding of the hierarchy of hazard identification and control
Organisational and workplace standards, requirements, policies and procedures for conducting operations for the crane class
Procedures for the recording, reporting and maintenance of workplace records and information
Typical routine problems encountered in the operation of the crane and equipment and adjustments required for correction

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for the Training Package.

Overview of assessment

Successful assessment of this unit meets the competency requirement of the National Standard for Licensing Persons Performing High Risk Work.

State/territory OH&S regulators have mandated the use of Assessment Instruments and Instructions for Assessment for this unit which have been endorsed by the national body responsible for OH&S matters.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Compliance with OH&S licensing legislation.

Communicate and work safely with others in the work area.

Risk assessment and management procedures (particular awareness of the risks associated with overhead powerlines/electrical cables, ground conditions, crane tipping, other vehicles and personnel).

Operation of a non-slewing mobile crane including all functions to their maximum extension in the lifting and moving of loads to the safe working rated capacity of non-slewing mobile cranes (over 3t capacity) in conjunction with other associated personnel. Appropriate mathematical procedures for estimation of loads.

Context of and specific resources for assessment

Assessment of the safe and effective application of knowledge and skill to workplace tasks (performance) must be undertaken using the endorsed Assessment Instrument.

Assessment of performance must be undertaken either in the workplace or in a realistically simulated workplace setting. Assessors must ensure that the assessment in the workplace is organised to ensure that all the required equipment and materials and a suitable working area is made available to suit the assessment and the workplace.

Assessment must occur under standard and authorised work practices, safety requirements and environmental constraints. Assessment is to comply with relevant appropriate standard requirements. Applicants must have access to:
Personal Protective Equipment (PPE) for the purpose of the Performance Assessment appropriate non-slewing crane (greater than 3 tonnes) and associated equipment in safe condition
suitable loads as specified by endorsed assessment instrument
communication equipment (e.g. two-way radios, whistles, etc.)
other associated personnel to sling and direct the loads.

Method of assessment

Assessment must be conducted using the endorsed Assessment Instruments. These Instruments provide advice on their application.
The use of '**simulators**' in the assessment of this unit of competency is **not acceptable**. Assessment may be in conjunction with the assessment of other units of competency. Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.
Assessment must confirm a reasonable inference that competency is not only able to be satisfied under the particular circumstances, but is able to be transferred to other circumstances.

Guidance information for assessment

Further information about endorsed Assessment Instruments may be obtained from state/territory OH&S regulators.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below.

Hazards

May include but not limited to:
ground stability (e.g. ground condition, recently filled trenches, slopes)
overhead hazards (e.g. powerlines, service pipes)
insufficient lighting
traffic (e.g. pedestrians, vehicles, other plant)
environmental conditions (e.g. wind, lightning, storms, etc.)
other specific hazards (e.g. dangerous materials)

Hazard control measures

Refers to the systematic process of eliminating or reducing the risk to personnel and property through the application of controls
It includes the application of the hierarchy of control, the six-step preference of control measures to manage and control risk:
1 elimination
2 substitution
3 isolation
4 engineering control measures
5 using safe work practices
6 personal protective equipment

Appropriate standards

May include but not limited to:
codes of practice
legislation
Australian standards
manufacturer's specifications
industry standards (where applicable)

Associated personnel

May include but not limited to:
doggers
riggers

Appropriate

May include but not limited to:
crane capabilities
environmental conditions (e.g. wind, lightning, storms, etc.)

Crane	May include: a crane (greater than 3 tonnes capacity) which meets the requirements of AS1418 articulated type mobile cranes locomotive cranes Does not include vehicle tow truck operations
Communication method	May include but not limited to: verbal and non-verbal language written instructions signage hand signals listening questioning to confirm understanding appropriate worksite protocol
Signage and labels	May include but not limited to: crane data plates/labels load charts crane decals control labels
Procedures	May include but not limited to: manufacturer's guidelines (instructions, specifications, operators manual or checklists) industry operating procedures workplace procedures (work instructions, operating procedures, checklists)
Controls	May include but not limited to: luffing levers hoisting and lowering levers slewing levers including brake boom extension levers (where fitted)
Service logbook	May include but not limited to: any logbook service book history record system where the service and maintenance history is kept
Crane safety devices	May include but not limited to: horns/sirens audible and visual reversing devices operator restraint devices lights

Communication equipment

May include but not limited to:
fixed channel two-way radios
whistles
bells
buzzers
NB: where radio communication equipment is used the transmitting frequencies of the equipment must be selected to prevent interference to or from other radio equipment being used in the vicinity of the crane

Ground suitability

May include but not limited to:
rough uneven ground
backfilled ground
soft soils
hard compacted soil
rock
bitumen
concrete

Stability

May include but not limited to:
deploying outriggers
establishing correct size plates or packing
correctly positioning plates or packing

Crane configuration

May include but not be limited to:
boom/jib
fly-jib
counterweights

Hazard prevention/control measures

May include but not limited to:
safety tags on electrical switches/isolators
insulated powerlines
safety observer used inside exclusion zone
disconnected power
traffic barricades and control/s
pedestrian controls
trench covers
movement of obstructions
personal protective equipment
adequate illumination

Test lift

The load is lifted just clear of the lifting plane to allow for checks to be safely made in consultation with associated personnel to ensure that:
near capacity loads do not overload the crane
loads of unusual shape or weight distribution

are correctly slung
load measuring equipment can be used to
verify the calculated weight of the load
all crane equipment is functioning properly
adjustments to the slinging can be made in a
safe manner

Relevant crane movements

May include but not limited to:
telescope in and out
boom/jib up and down
articulating (as applicable)
raise and lower hoist (as applicable)

Communication signals

May include but not limited to:
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

Unplanned and/or unsafe situations

May include but not limited to:
failure/loss of control (e.g. brakes and steering)
failure of equipment (e.g. hydraulic system)
environmental conditions (e.g. wind, lightning, storms, etc.)

Planned route

May include but not limited to:
unusual or difficult terrains
obstacles or obstruction

Best mobile practice

May include but not limited to:
minimum speed
gentle acceleration and braking (to minimise load swing)
minimum boom/jib length
carrying the load near to the ground surface
use of handheld taglines

Shut down

May include but not limited to:
retracting boom/jib/fly (where applicable)
retracting hoist rope and hook block

idling engine to stabilise temperature
retracting outriggers/stabilisers (where applicable)
turning off engine

Unit Sector(s)

Not applicable.