



Australian Government

Department of Education, Employment and Workplace Relations

TLILIC0012A Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)

Release: 1

TLILIC0012A Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor	This unit specifies the outcomes required to operate a vehicle loading crane with a capacity of 10 metre tonnes or more, mounted on a vehicle for the principle purpose of loading and unloading such a vehicle, including the application of load estimation and slinging techniques to move a load, for licensing purposes.
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Application of the Unit

Application of the Unit	<p>This unit requires the operator to plan the work, conduct routine checks, set up crane, transfer loads and shut down and secure crane.</p> <p>This unit is based on the requirements of the National Standard for Licensing Persons Performing High Risk Work.</p> <p>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.</p>
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<i>Elements describe the essential outcomes of a unit of competency</i>	<i>Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.</i>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work	1.1 Potential workplace <i>hazards</i> are identified 1.2 <i>Hazard control measures</i> are identified consistent with <i>appropriate standards</i> to ensure the safety of personnel and equipment 1.3 The weight of the load is identified and estimated in consultation with <i>associated personnel</i> (where applicable) 1.4 Suitable lifting points on the load are identified in consultation with <i>associated personnel</i> 1.5 Appropriate <i>lifting equipment</i> is obtained following consultation with <i>associated personnel</i> 1.6 <i>Crane</i> is <i>appropriate</i> to the load/s and workplace conditions 1.7 Appropriate paths for the movement of loads in the work area are inspected and determined 1.8 Appropriate <i>communication methods</i> are identified with <i>associated personnel</i>
2. Conduct routine checks	2.1 <i>Crane</i> is visually checked for any damage or defects 2.2 All <i>signage and labels</i> are visible and legible according to the <i>appropriate standard</i> . 2.3 Routine pre-operational crane checks are carried out according to <i>procedures</i> 2.4 All <i>controls</i> are located and identified 2.5 Crane <i>service logbook</i> is checked for compliance 2.6 <i>Crane</i> is started according to <i>procedures</i> and checked for any abnormal noises 2.7 All crane <i>safety devices</i> are tested according to <i>procedures</i> 2.8 Post-start operational checks are carried out according to <i>procedures</i> 2.9 All <i>communication equipment</i> is checked for serviceability 2.10 All damage and defects are reported and recorded according to <i>procedures</i> , and appropriate action is taken
3. Set up crane	3.1 <i>Ground suitability</i> is checked 3.2 <i>Crane</i> is driven to the work area according to <i>procedures</i> 3.3 <i>Crane</i> is positioned for work application and <i>stability</i> according to <i>procedures</i> 3.4 Boom/jib and configuration data is input into the crane computer (as required) 3.5 Appropriate <i>hazard prevention/control measures</i> are applied to the work area according to

ELEMENT	PERFORMANCE CRITERIA
	<p><i>procedures</i></p> <p>3.6 All communications equipment is tested for functionality</p> <p>3.7 Lifting equipment is prepared for load according to <i>procedures</i></p> <p>3.8 Load destination is prepared</p>
4. Transfer loads	<p>4.1 Loads are determined within the capacity of the crane</p> <p>4.2 Boom/jib and hoist block is positioned over load following directions from associated personnel</p> <p>4.3 Lifting equipment is attached and secured using defined techniques according to <i>procedures</i></p> <p>4.4 Test lift is carried out according to <i>procedures</i></p> <p>4.5 Loads are transferred using all relevant crane movements according to <i>procedures</i> and the appropriate standard</p> <p>4.6 All required communication signals are correctly interpreted according to <i>procedures</i> and the appropriate standard</p> <p>4.7 The load is landed ensuring stability and security from movement</p> <p>4.8 Lifting equipment is removed or disconnected from load and/or lifting hook according to <i>procedures</i> (where applicable)</p> <p>4.9 Crane is operated according to <i>procedures</i></p> <p>4.10 Load movement is monitored constantly ensuring safety to personnel and load, and crane stability</p> <p>4.11 Unplanned and/or unsafe situations are responded to in line with <i>procedures</i></p>
5. Shut down and secure crane	<p>5.1 Crane boom/jib and equipment are stowed and secured according to <i>procedures</i> and the appropriate standard</p> <p>5.2 Relevant motion locks and brakes are applied (where applicable)</p> <p>5.3 Outriggers/stabilisers are stowed and secured according to <i>procedures</i></p> <p>5.4 Plates or packing are stowed and secured.</p> <p>5.5 Crane is shut down according to <i>procedures</i></p> <p>5.6 Routine post-operational crane checks are carried out according to <i>procedures</i></p> <p>5.7 Lifting equipment is stored according to <i>procedures</i> and the appropriate standards</p> <p>5.8 All damage and defects are reported and recorded according to <i>procedures</i>, and appropriate action is</p>

ELEMENT	PERFORMANCE CRITERIA
	taken

Required Skills and Knowledge

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 hand signals, whistles and two-way radios
- Use interpersonal communication skills at a level sufficient to communicate with other site personnel
- Operate crane including all functions to their maximum extension in the loading and unloading of loads to the safe working rated capacity of the crane, in conjunction with other associated personnel
- Use of lifting equipment and basic slinging techniques suitable for the loads to be loaded/unloaded as defined by workplace procedures
- Apply risk assessment and hazard control strategies, including hierarchy of control as applied to the positioning and safe operation of the vehicle loading crane (particular awareness of the risks associated with overhead powerlines/electrical cables, ground conditions and vehicle tipping)
- Use and interpret crane manufacturer's specifications and data, including load charts to enable the vehicle loading crane to be configured for the load
- Verify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge:

- Appropriate mathematical procedures for estimation of loads
- Assessment of ground conditions to confirm that the site is suitable (e.g. firm, level and safe) to operate the crane
- Awareness of the boom/jib movements and particularly the safe positioning of the operator for any lift
- Commonwealth, state or territory OH&S legislation, standards and codes of practice relevant to the full range of processes for the crane class
- Use of lifting equipment and basic slinging techniques suitable for the loads to be loaded/unloaded as defined by workplace procedures
- Understanding of the hierarchy of hazard identification and control
- Level of literacy to be able to read and comprehend manufacturer's instructions, procedures and safety signs

REQUIRED SKILLS AND KNOWLEDGE

- 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 process and with equipment and adjustments required for correction
- Crane characteristics and capabilities to allow the configuration of the crane to suit the range of loads

Evidence Guide

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.
- Assessment of ground conditions to confirm that the site is suitable (e.g. firm, level and safe) to operate the vehicle loading crane.
- Risk assessment and hazard control strategies, including hierarchy of control as applied to the positioning and safe operation of the vehicle loading crane (particular awareness of the risks associated with overhead powerlines/electrical cables, ground conditions, wind, pedestrians and tipping).
- Set up, position stabilise and operate a vehicle loading crane including all functions to their maximum extension in the loading and unloading of loads to the safe working rated capacity.
- Move loads from the vehicle to the ground and/or ground to the vehicle as described in the endorsed

EVIDENCE GUIDE	
	<p>assessment tool.</p> <ul style="list-style-type: none">• Appropriate mathematical procedures for estimation of loads.• Use of lifting equipment and basic slinging techniques suitable for the loads to be loaded/unloaded as defined in the workplace procedures.• Awareness of the boom/jib movements and particularly the safe positioning of the operator for any lift.

EVIDENCE GUIDE	
Context of and specific resources for assessment	<ul style="list-style-type: none"> • 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 appropriate standard requirements. • Applicants must have access to: <ul style="list-style-type: none"> • Personal Protective Equipment (PPE) for the purpose of the Performance Assessment • appropriate vehicle loading crane (10 metre tonne or more) and associated equipment in safe condition • appropriate lifting gear in safe condition • Suitable loads as specified by the endorsed Assessment Instrument • communication equipment (e.g. two-way radios, whistles, etc.) • other associated personnel to sling and direct the loads.
Method of assessment	<ul style="list-style-type: none"> • 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 circumstance, but is able to be transferred

EVIDENCE GUIDE

	to other circumstances.
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EVIDENCE GUIDE	
Guidance information for assessment	<ul style="list-style-type: none"> • Further information about endorsed Assessment Instruments may be obtained from state/territory OH&S regulators.

Range Statement

RANGE STATEMENT	
<p><i>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.</i></p>	
Hazards	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • ground stability (e.g. ground condition, recently filled trenches, slopes) • overhead hazards (e.g. powerlines, service pipes) • traffic (e.g. pedestrians, vehicles, other plant) • Insufficient lighting • environmental conditions (e.g. wind, lightning, storms, etc.) • positioning of crane operator • other specific hazards (e.g. dangerous materials)
Hazard control measures	<p>Refers to the systematic process of eliminating or reducing the risk to personnel and property through the application of controls</p> <p>It includes the application of the hierarchy of control, the six-step preference of control measures to manage and control risk:</p> <ol style="list-style-type: none"> 1 elimination 2 substitution 3 isolation 4 engineering control measures 5 using safe work practices 6 personal protective equipment
Appropriate standards	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • codes of practice • legislation • Australian standards especially AS2550.1 - 2002 (6.5) • manufacturer's specifications

RANGE STATEMENT

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| <ul style="list-style-type: none">• industry standards |
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RANGE STATEMENT	
Associated personnel	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • doggers • riggers
Lifting equipment	<p>May include but not be limited to:</p> <ul style="list-style-type: none"> • chain slings • wire and synthetic slings • shackles • eyebolts
Crane	<p>A crane with a capacity of 10 metre tonnes and above mounted on a vehicle for the principle purpose of loading and unloading such a vehicle</p>
Appropriate	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • crane capabilities • environmental conditions (e.g. wind, lightning, storms, etc.)
Communication method	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal and non-verbal language • written instructions • signage • hand signals • listening • questioning to confirm understanding • appropriate worksite protocol
Signage and labels	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • crane data plates/labels • load charts • crane decals • control labels
Procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • manufacturer's guidelines (instructions, specifications or checklists) • industry operating procedures • workplace procedures (work instructions, operating procedures, checklists)
Controls	<p>May include but not limited to:</p>

RANGE STATEMENT	
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| | <ul style="list-style-type: none">• luffing levers• knuckling levers• hoisting and lowering levers• slewing levers including brake• boom extension levers (where fitted) |
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RANGE STATEMENT	
Service logbook	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • any logbook • service book • history record system where the service and maintenance history is kept
Crane safety devices	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • horns/sirens • audible and visual warning devices • lights
Communication equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • fixed frequency two-way radios • whistles
Ground suitability	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • rough uneven ground • backfilled ground • soft soils • hard compacted soil • rock • bitumen • concrete
Stability	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • deploying outriggers • establishing correct size plates or packing • correctly positioning plates or packing
Hazard prevention/control measures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • safety tags on electrical switches/isolators • insulated powerlines • safety observer used inside exclusion zone • disconnected power • traffic barricades and controls • pedestrian controls • trench covers • movement of obstructions • personal protective equipment • adequate illumination
Load destination	<p>May include but not limited to:</p>

RANGE STATEMENT	
	<ul style="list-style-type: none">• ground• vehicles

RANGE STATEMENT	
Defined techniques	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • fixed lifting points • basic reeved slings
Test lift	<p>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:</p> <ul style="list-style-type: none"> • 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 equipment is functioning properly • adjustments to the slinging can be made in a safe manner
Relevant crane movements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • luffing • slewing • knuckling • telescoping • raise and lower hoist
Communication signals	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • 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
Unplanned and/or unsafe situations	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • failure/loss of control (e.g. brakes and steering) • failure of equipment (e.g. hydraulic system)

RANGE STATEMENT	
	<ul style="list-style-type: none">• environmental conditions (e.g. wind, lightning, storms, etc.)
Shut down	May include but not limited to: <ul style="list-style-type: none">• retracting boom/jib (where applicable)• retracting hoist rope and hook block• folding boom/jib into the transport position• retracting outriggers/stabilisers• idling engine to stabilise temperature• turning off engine (where applicable)• removing key from ignition (where applicable)• locking and securing cabin (where applicable)• securing crane for travel

Unit Sector(s)

Not Applicable