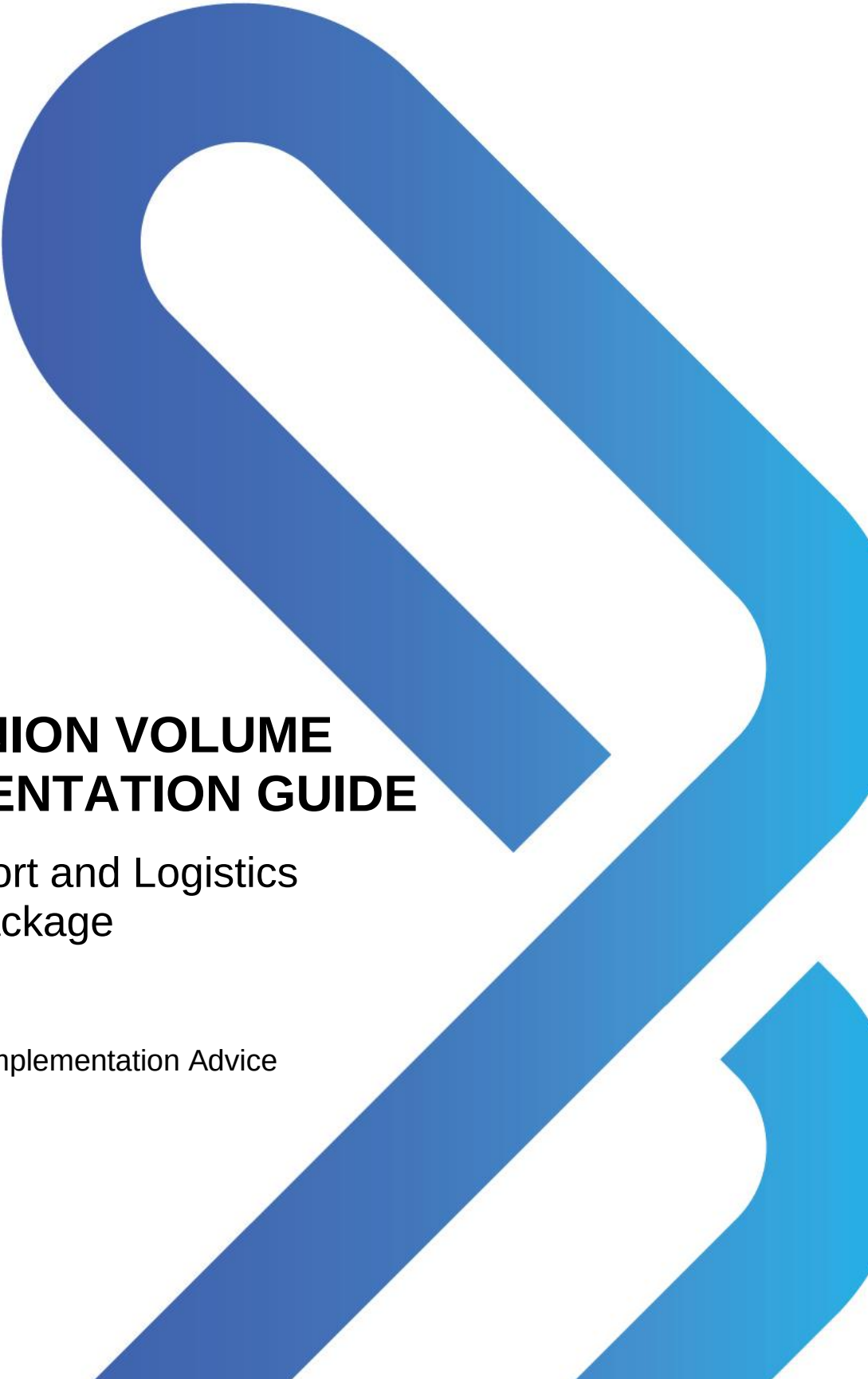




COMPANION VOLUME IMPLEMENTATION GUIDE

TLI Transport and Logistics
Training Package

Release 16.0

Attachment F: Implementation Advice
For TLIL-TLIP

The following Companion Volume Implementation Guides (CVIG) Attachments are kept in separate files for ease of access. Attachment breakdown below.

ATTACHMENT A-C:

Qualification Mapping

Skill Sets Mapping

Units of Competency Mapping

ATTACHMENT D:

Summary of Qualification Licensing/Regulatory information

ATTACHMENT E:

Training Package pathways advice

ATTACHMENT F:

TLI Implementation Advice – TLIA - TLIB

TLI Implementation Advice – TLIC – TLID

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ATTACHMENT G-H:

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ABOUT INDUSTRY SKILLS AUSTRALIA

Industry Skills Australia (ISA) has been appointed as the Jobs and Skills Council for the nation's Transport and Logistics, Rail, Aviation and Maritime industries and the emerging sectors of Omnichannel Logistics and Distribution, and Air and Space Transport and Logistics.

Jobs and Skills Councils have **four (4) broad roles**:

1. **Industry Stewardship** which involves gathering industry intelligence to reliably represent the views and needs of industry back to the VET system and its decision-makers
2. **Workforce Planning** which enables industry to identify its workforce development issues and design high-impact solutions, which are then captured in the Committee's national Workforce Plan for the industry
3. **Training Product Development** which focusses on improving the quality, speed to market and responsiveness of training products to employer and workforce needs
4. **Implementation, promotion and monitoring** which involves supporting training providers, promoting careers and monitoring how well the system is meeting the needs of industry and learners.

Jobs and Skills Councils replace and subsume the work of previous Industry Reference Committees, Skills Service Organisations and Skills Organisations.

ISA was established in early 2023, 28 years after its predecessor the Transport and Logistics Industry Skills Council (TLISC) was established in 1996 and Australian Industry Standards (AIS) in 2016. More information about ISA can be found at www.industryskillsaustralia.org.au.

ATTACHMENT F: IMPLEMENTATION ADVICE

LIC: Licensing Units

TLILIC0001 Licence to transport dangerous goods by road	
Training and assessment duration:	It is a licensing requirement that this course be conducted over two or more training days including a minimum of 16 hours of supervised training and assessment
Operations may be conducted:	- by day or night - in a range of work environments and weather conditions
Customers may be:	internal or external
Workplaces may comprise:	large, medium or small worksites
Work may be conducted in:	- controlled or open environments - exposed conditions - restricted spaces
Vehicle refers to:	all applicable transportation modes
Hazards in the work area may include exposure to:	- contamination of, or from, materials being handled - dust/vapours - hazardous or dangerous materials - noise, light, energy sources - service lines - spills, leakages, ruptures - stationary and moving machinery, parts or components
Hazard management is:	consistent with the principle of hierarchy of control with elimination, substitution, isolation and engineering control measures being selected before safe working practices and personal protective equipment (PPE)
Personal protective equipment (PPE) may include:	- breathing apparatus - gloves - high visibility clothing - mask or respirator - safety glasses - safety headwear and footwear
Load restraint systems are:	as detailed in the National Load Restraint Guide
Preparation of packaged dangerous goods for transport may:	require special precautions as specified by the manufacturer

Transport documentation may include:	• descriptions for dangerous goods (i.e. proper shipping name, class and division number, packing group, subsidiary risk(s) if any) • emergency procedure guide • safety data sheets (SDS)/material safety data sheets (MSDS) • transport emergency response plan (TERP) • UN or ID number
Requirements for work may include:	• additional gear and equipment • authorities and permits • communications equipment • hours of operation • incident breakdown procedures • noise restrictions • site restrictions and procedures • specialised lifting and/or handling equipment • use of safety and PPE
Consultative processes may involve:	• industrial relations, work health and safety (WHS)/occupational health and safety (OHS) specialists, and other maintenance, professional or technical staff • management and union representatives • other employees and supervisors • suppliers, potential customers and existing clients
Communication in the work area may include:	• electronic data interchange (EDI) • email • fax • internet • oral, aural or signed communications • phone • radio
Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:	• company procedures • enterprise procedures • established procedures • organisational procedures • site procedures
Safety equipment on vehicle may include:	• eye wash kit • fire extinguishers • portable warning devices

Information/documents may include:	• award, enterprise bargaining agreement, other industrial arrangements • current Australian Dangerous Goods (ADG) Code, relevant Australian and international standards • emergency procedures • goods identification numbers, codes and signs • manifests, bar codes, goods and product identification • manufacturer specifications for equipment/tools • manufacturer specifications, instructions and labelling advice for the transport of dangerous goods, including SDS/MSDS • quality assurance procedures • relevant standards and certification requirements • supplier and/or client instructions • workplace procedures and policies for the preparation and transport of dangerous goods
Applicable regulations and legislation may include:	• Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including current Australian Dangerous Goods (ADG) Code, Australian Marine Orders and the International Maritime Dangerous Goods (IMDG) Code and International Air Transport Association (IATA) Dangerous Goods by Air regulations • Australian and state/territory regulations related to the transport of dangerous goods by road • relevant Australian and international standards • relevant state/territory environmental protection legislation • relevant state/territory WHS/OHS legislation • state/territory mass and loading regulations
TLILIC0003 Licence to operate a forklift truck	
• Hazards may include:	• forklift instability (e.g. overloading, poor load placement, irregular loads) • ground conditions (e.g. condition of pavement, slopes) • insufficient lighting • other hazards (e.g. dangerous materials) • overhead hazards (e.g. powerlines, service pipes) • traffic (e.g. pedestrians, vehicles, other plant) • weather (e.g. wind, lightning, rain)
• Appropriate standards may include:	• Australian Standards • industry standards (where applicable)

	• legislation • manufacturer specifications
• Communications methods may include:	• appropriate worksite protocol • hand signals • listening • questioning to confirm understanding • signage • verbal and non-verbal language • written instructions
• Procedures may include:	• industry operating procedures • manufacturer guidelines, instructions, specifications or checklists • workplace procedures (work instructions, operating procedures, checklists)
• Pre-start operational checks include:	• approved modifications and/or attachments fitted to manufacturer specifications (e.g. as per forklift or attachment data plate) are identified • checks for adaptations or modifications outside manufacturer specifications (e.g. not listed on the forklift or attachment data plate) are carried out • external visual check including, evidence of damage, leaks, visual evidence of structural weaknesses (including paint separation or stressed welds) is carried out • forklift attachment is checked for security • forklift data plate fitted and interpreted • logbook, handbook or operating manuals available • maintenance logbook/records checked • safety devices where fitted
• Post-start operational checks include one or more of the following:	• attachment movements and control functions are smooth and comply with operating requirements • hazard warning systems (for example lights and horns), are functional • steering, transmission and brake functions comply with operating requirements
• Hazard prevention/control measures may include:	• adequate illumination • barricades and traffic control • disconnected power

	• excavation safeguards • insulated powerlines • movement of obstructions • pedestrian control (barricades, signs, etc.) • personal protective equipment (PPE) • safety observer used inside exclusion zone • safety tags on electrical switches/isolators
• Unplanned and/or unsafe situations include one or more of the following:	• environmental condition • failure of equipment (e.g. hydraulic system) • failure/loss of control (e.g. brakes and steering)
• Shutdown includes one or more of the following:	• appropriate transmission/gear is selected for parking (relevant to transmission type) • batteries are connected to the charger (if applicable) • engine power is turned off • ensuring access ways are clear • fork arms are correctly positioned (tips down, tilted forward, lowered to ground) • hand/parking brake is applied • identifying and segregating defective equipment and reporting to authorised personnel • ignition key is removed (if applicable) • liquid petroleum gas (LPG) gas cylinder valve is shut off (where fitted) • parking in a suitable location away from dangerous areas • securing equipment against unauthorised operation • securing the site
Compliance with relevant permit condition requirements from electrical supply authority include:	• adequate illumination • disconnected power • excavation safeguards • insulated electric lines • maintaining safety observer zone • movement of obstructions • pedestrian control (barricades, signs, etc.) • power disconnection or compliance with electrical supply authority requirements • preserving limits of approach

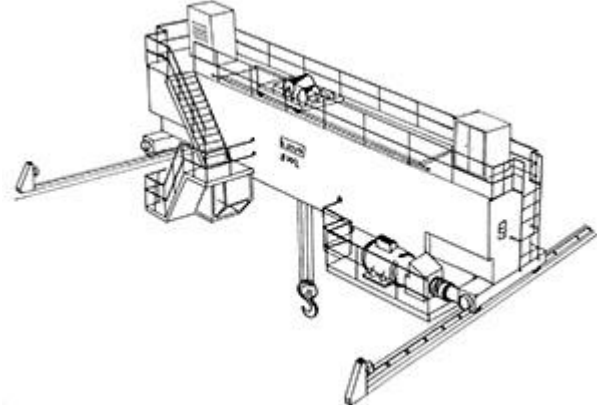
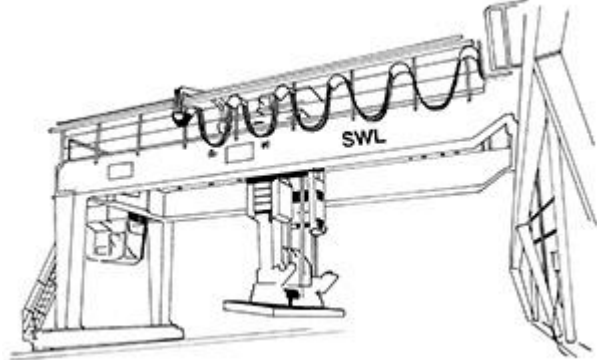
	• safety tags on electrical switches/isolators • using safety observer inside exclusion zone • using personal protective equipment (PPE)
Other specific hazards include:	• tidal areas • chainsaws • pressure washers • dangerous materials
Traffic management plan procedures and requirements include:	• traffic controllers • no parking areas • exclusion zones • walkways • insulated electric lines and power disconnected
Problems and equipment faults, and implementing appropriate response procedures to unplanned and/or unsafe situations include:	• contact with overhead electrical conductors • damage caused by contact with obstructions • environmental conditions including wind, lightning, storms, water on ground • failure of controls • illness of personnel • loss of power
Definition for failure of equipment during forklift truck operations	• the equipment = attachments fitted to the forklift • equipment = part of the load that is supporting the load (e.g. bulker bag splitting or liquid container leaking, or pallet breaking) • other equipment = in the workplace that may fail (e.g. traffic lights, buzzers, infra-red beams, etc.)
TLILIC0004 Licence to operate an order picking forklift truck	
Hazards include:	• environmental conditions (e.g. wind, lightning, rain) • ground conditions (e.g. condition of surface, slopes) • order picking forklift instability (e.g. overloading, poor load placement, irregular loads) • other specific hazards (e.g. falling from platform, dangerous materials) • overhead hazards (e.g. powerlines, service pipes) • traffic (e.g. pedestrians, vehicles, other plant)
Appropriate standards include:	• Australian Standards • codes of practice • industry standards (where applicable) • legislation

	• manufacturer specifications
Forklift includes:	• powered industrial truck of a type where the operator's control arrangement is incorporated with the load carriage/lifting media, and elevates with it
Communication methods include:	• hand signals • listening • questioning to confirm understanding, and appropriate worksite protocol • signage • verbal and non-verbal language • written instructions
Procedures include:	• industry operating procedures • manufacturer guidelines, instructions, specifications or checklists • workplace procedures (work instructions, operating procedures, checklists)
Signage and labels include one or more of the following:	• control labels • forklift data plates/labels • forklift warning decals
Pre-start up checks include:	• approved modifications and/or attachments are fitted to manufacturer specifications (e.g. as per order picking forklift data plate) • battery charge checks • checks for adaptations or modifications outside manufacturer specifications (e.g. not listed on the order picking forklift data plate) are made • evidence of damage, leaks, visual evidence of structural weaknesses (including paint separation or stressed welds) is sought through an external visual check • fluid checks • logbook, handbook or operating manuals are available • order picking forklift data plate is fitted and interpreted • records are updated as required • safety devices/alarms are fitted and operational • safety equipment checks
Post-start operational checks include:	• checks of the order picking forklift truck and equipment to ensure: • control functions are smooth and comply with operating requirements • hazard warning systems (for example lights and horns) are functional • start-up is to procedures
Safety devices may include:	• deadman switch

	• emergency descent device (hydraulic) • flashing lights • reversing beepers • safety gates and interlocks
Hazard prevention/control measures include:	• adequate illumination • bridging plates • disconnected power • insulated powerlines • movement of obstructions • pedestrian barricades • personal protective equipment (PPE) • safety observer used inside exclusion zone • safety tags on electrical switches/isolators • traffic barricades and control
Safety equipment may include but is not limited to:	• appropriate attachment point • harnesses • lanyard
Unplanned and/or unsafe situations may include but are not limited to:	• environmental conditions (e.g. wind, lightning, storms, etc.) • failure of equipment (e.g. hydraulic system) • failure/loss of control (e.g. brakes and steering)
Shutdown includes:	• batteries are connected to the charger (if applicable) • brakes and motion locks are applied (where applicable) • forks are lowered to the ground • ignition key is removed (if applicable) • motor power is turned off • order picking forklift is secured against unauthorized movement
Overhead hazards include:	• electric lines • service pipes • doorways • roof beams • lights • fixed structures
TLILIC0005 Licence to operate a boom-type elevating platform boom	
Compliance with relevant permit condition requirements from electrical supply authority include:	• adequate illumination • disconnected power • excavation safeguards

	- insulated electric lines - maintaining safety observer zone - movement of obstructions - pedestrian control (barricades, signs, etc.) - power disconnection or compliance with electrical supply authority requirements - preserving limits of approach - safety tags on electrical switches/isolators - using safety observer inside exclusion zone - using personal protective equipment (PPE)
Other specific hazards include:	- tidal areas - chainsaws - pressure washers - dangerous materials
Traffic management plan, procedures and requirements include:	- traffic controllers - no parking areas - exclusion zones - walkways - insulated electric lines and power disconnected
Problems and equipment faults, and implementing appropriate response procedures to unplanned and/or unsafe situations include:	- contact with overhead electrical conductors - damage caused by contact with obstructions - environmental conditions including wind, lightning, storms, water on ground - failure of controls - illness of personnel - loss of power
Procedures for shutting down a boom type elevating work platform (EWP) in accordance with manufacturer requirements and workplace procedures include:	- activating E-Stop and switching off machine according to manufacturer requirements - checks for leaks/damage/dents - conducting procedures for isolating fuel source as per manufacture instructions - connecting relevant new fuel source to EWP using appropriate PPE - ensuring access ways are clear - folding boom/s and jib into the relevant park position - idling engine to stabilise temperature - isolating work platform controls or positioning as required - applying relevant locking pins or tie down devices (where fitted) - removal of harness, lanyard and equipment from platform

	- removing key from ignition - retraction of boom/s and jib - retraction of outriggers - securing equipment in accordance with manufacturer requirements and workplace requirements against unauthorised operation - securing site
TLILIC0011 Licence to operate a reach stacker greater than 3 tonnes capacity	
Assessment of suitability of planned route for reach stacker and path is in accordance with traffic management plan and must consider the following:	- clear of obstacles - clear of personnel - free of ramps or inclines
Problems and equipment faults, and application of appropriate response procedures to unplanned and/or unsafe situations include:	- checking for any abnormal instrument readings/warnings, lights and noise/operation - failure of equipment including hydraulic system - failure/loss of control including brakes and steering - ground suitability, including backfilled rough, uneven ground and soft soils - obstacles and obstructions - rail car/road transport moving unannounced while loading/discharging - structural integrity - unusual or difficult terrains
TLILIC0016 Licence to operate a bridge and gantry crane	
Candidate Suitability and Pathways Advice: This unit is most suited to an individual who has attained a current National High-Risk Work Licence (HRWL) to perform dogging or a current certification for a specific VET course for HRWL to perform dogging that has been issued by, or on behalf of a work health and safety (WHS) regulator, and has experience in dogging work, although this is not a prerequisite nor a prohibitive requirement to undertake the unit.	
Bridge Crane:	- consists of a bridge beam or beams that are mounted to end carriages at each end - is capable of travelling along elevated runways, and - has one or more hoisting mechanisms arranged to traverse across the bridge. - Example:

	
Bridge and Gantry Crane	• consists of a bridge beam or beams supported at one or both ends by legs mounted to end carriages • is capable of travelling on supporting surfaces or deck levels, whether fixed or not, and • has a crab with one or more hoisting units arranged to travel across the bridge. • Example: 
Hazards may include:	• environmental conditions (e.g. wind, lightning, storms, etc.) • ground stability (e.g. ground condition for load placement) • insufficient lighting • other specific hazards (e.g. dangerous materials) • overhead hazards • traffic (e.g. pedestrians, vehicles and other plant)
Appropriate standards may include:	• Australian Standards especially AS 2550.1 Cranes, hoists and winches - Safe use - General requirements, and AS 2550.3 Cranes, hoists and winches - Safe use - Bridge, gantry, portal (including container cranes) and jib cranes • codes of practice • industry standards • relevant legislation • manufacturer specifications

Associated personnel may include:	• doggers • riggers
Lifting equipment may include:	• chain slings • eyebolts • shackles • wire and synthetic slings • magnets • vacuum • grabs
Communication methods may include:	• appropriate worksite protocol • hand signals • listening • questioning to confirm understanding • signage • whistle signals • verbal and non-verbal language • written instructions
Signage and labels include one or more of the following:	• control labels • crane data plates/labels • crane decals • load charts • safety signage
Procedures may include:	• industry operating procedures • manufacturer guidelines, instructions, specifications or checklists • workplace procedures (work instructions, operating procedures and checklists)
Controls may include:	• hoisting and lowering controls • long travel controls • cross travel controls • rotating hook controls • emergency stop • remote control
Service logbook includes:	• any logbook • history record system where the service and maintenance history is kept • service book

Crane safety devices may include:	• audible and visual warning devices • horns/sirens • lights
Communication equipment may include:	• two-way radios • whistles • bells/buzzers
Hazard prevention/control measures include one or more of the following:	• adequate illumination • disconnected power • insulated powerlines • removal of obstructions • pedestrian controls • personal protective equipment (PPE) • safety observer • safety tags on electrical switches/isolators • traffic barricades and controls
Test lift includes:	• 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: - adjustments to the slinging can be made in a safe manner - all equipment is functioning properly - load measuring equipment can be used to verify the calculated weight of the load - loads of unusual shape or weight distribution are correctly slung - near capacity loads do not overload the crane
Relevant crane movements may include:	• hoisting • traversing (moving hoisting mechanisms across the bridge) • travelling (at minimum speed, gentle acceleration and braking, to minimise load swing)
Communication signals may include the following:	• hoist down - hand • hoist down - whistle • hoist up - hand • hoist up - whistle • stop - hand • stop – whistle • traverse – hand • travel – hand • creep – hand

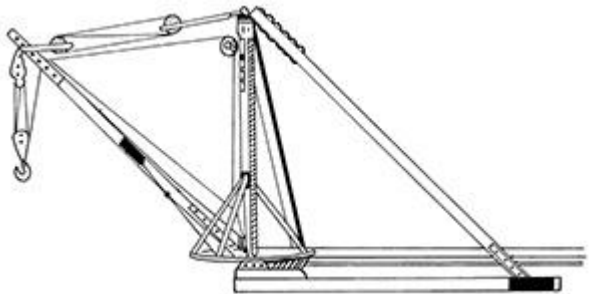
Slings techniques means:	the exercising of judgement in relation to the suitability and condition of lifting gear and the method of slinging, by consideration of the nature of the load, its mass and its centre of gravity.
Unplanned and/or unsafe situations may include:	- environmental conditions (e.g. wind, lightning, storms, etc.) - failure of equipment (e.g. hydraulic system) - failure/loss of control (e.g. brakes and steering)
Shutdown includes the following:	- retracting hoist rope and hook block - travelling crane to park position - removing key from control panel - locking and securing cabin - isolating power to crane
Four-powered operations:	- allows for traversing, travelling, hoisting and rotating - may include: - rotating the hook or attachment by movement of crane support structure - rotation provided at the hook by the hook or a rotator attachment on the hook - energising a magnetic lifting device - energising a vacuum lifting device - opening and closing a grab for hoisting and lowering a load device - remote controlled hook latch allowing the hook to be disengaged from the load As determined by each state/territory regulator - does not include: - two hoists controlled independently using separate remote controls - two hoists controlled independently but only one can be selected for operation at a time (in tandem) - two hoists that are synchronised and can only be operated in unison

TLILIC0017 Licence to operate a derrick crane

Candidate Suitability and Pathways Advice:

This unit is most suited to an individual who has attained:

- a current National High-Risk Work Licence (HRWL) to perform dogging or a current certification for a specific VET course for HRWL to perform dogging that has been issued by, or on behalf of a work health and safety (WHS) regulator, and has experience in dogging work, although this is not a prerequisite nor a prohibitive requirement to undertake the unit.

b) a current national HRWL to perform rigging (intermediate) or a current certification for a specific VET course for HRWL to perform rigging (intermediate) that has been issued by, or on behalf of a WHS regulator, and has experience in derrick crane set-up, although this is not a prerequisite nor a prohibitive requirement to undertake the unit.	
Derrick Crane	- A derrick crane is a slewing strut-boom crane with the boom pivoted at the base of a mast which is either guyed (guy-derrick) or held by backstays (stiff-leg derrick) and which is capable of luffing under load. - Example: 
Hazards may include:	- environmental conditions (e.g. wind, lightning, storms, etc.) - ground stability (e.g. ground condition for load placement) - insufficient lighting - other specific hazards (e.g. dangerous materials) - overhead hazards (e.g. powerlines and service pipes) - traffic (e.g. pedestrians, vehicles and other plant)
Appropriate standards may include:	- Australian Standards especially AS 2550.1 Cranes, hoists and winches - Safe use - General requirements, and AS 2550.4 Cranes, hoists and winches – Safe use – Tower cranes - codes of practice - industry standards - relevant legislation - manufacturer specifications
Associated personnel may include:	- doggers - riggers
Lifting equipment may include:	- chain slings - eyebolts - shackles - wire and synthetic slings
Communication methods may include:	- appropriate worksite protocol - hand signals - listening - questioning to confirm understanding

	• whistle signals • signage • verbal and non-verbal language • written instructions
Signage and labels include one or more of the following:	• control labels • crane data plates/labels • crane decals • load charts • safety signage
Procedures may include:	• industry operating procedures • manufacturer guidelines, instructions, specifications or checklists • workplace procedures (work instructions, operating procedures and checklists)
Controls may include:	• hoisting and lowering levers • luffing levers • slewing levers, including brake • emergency stop
Service logbook includes:	• any logbook • history record system where the service and maintenance history is kept • service book
Crane safety devices may include:	• audible and visual warning devices • horns/sirens • lights • function limits
Communication equipment may include:	• two-way radios • whistles
Hazard prevention/control measures include one or more of the following:	• adequate illumination • disconnected power • insulated powerlines • removal of obstructions • pedestrian controls • personal protective equipment (PPE) • safety observer • safety tags on electrical switches/isolators • traffic barricades and controls

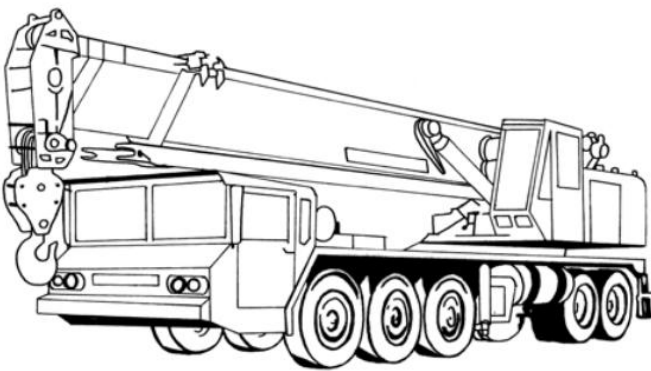
Test lift includes:	- load is lifted just clear of the lifting plane to allow for checks to be safely made in consultation with associated personnel to ensure that: - adjustments to the slinging can be made in a safe manner - all equipment is functioning properly - load measuring equipment can be used to verify the calculated weight of the load - loads of unusual shape or weight distribution are correctly slung - near capacity loads do not overload the crane
Relevant crane movements may include:	- luffing - hoisting - slewing
Communication signals include the following:	- hoist down - hand - hoist down - whistle - hoist up - hand - hoist up - whistle - luff boom down - hand - luff boom down - whistle - luff boom up - hand - luff boom up - whistle - stop - hand - stop - whistle - slew right - hand - slew right - whistle - slew left - hand - slew left - whistle
Unplanned and/or unsafe situations may include:	- environmental conditions (e.g. wind, lightning, storms, etc.) - failure of equipment (e.g. hydraulic system) - failure/loss of control (e.g. brakes and steering)
Shutdown includes the following:	- raising boom/jib to clear buildings and structures - retracting hoist rope and hook block - idling engine to stabilise temperature - turning off engine - isolating power supply to crane - removing key - locking and securing crane
TLILIC0019 Licence to operate a portal boom crane	
Candidate Suitability and Pathways Advice:	

This unit is most suited to an individual who has attained a current National High-Risk Work Licence (HRWL) to perform dogging or a current certification for a specific VET course for HRWL to perform dogging that has been issued by, or on behalf of a work health and safety (WHS) regulator, and has experience in dogging work, although this is not a prerequisite nor a prohibitive requirement to undertake the unit.	
Portal Boom Crane	- A portal boom crane is a boom crane or jib crane mounted on a portal frame, which is supported on runways along which the crane may travel. - Example: 
Hazards may include:	- environmental conditions (e.g. wind, lightning, storms, etc.) - ground stability (e.g. ground condition for load placement) - insufficient lighting - other specific hazards (e.g. dangerous materials) - overhead hazards (e.g. powerlines and service pipes) - traffic (e.g. pedestrians, vehicles and other plant)
Appropriate standards may include:	- Australian Standards especially AS 2550.1 Cranes, hoists and winches - Safe use - General requirements, and AS 2550.3 Cranes, hoists and winches - Safe use - Bridge, gantry, portal (including container cranes) and jib cranes - codes of practice - industry standards - relevant legislation - manufacturer specifications
Associated personnel may include:	- doggers - riggers
Lifting equipment may include:	- chain slings - eyebolts - shackles - wire and synthetic slings

Communication methods may include:	• appropriate worksite protocol • hand signals • listening • questioning to confirm understanding • whistle signals • signage • verbal and non-verbal language • written instructions
Signage and labels include one or more of the following:	• control labels • crane data plates/labels • crane decals • load charts • safety signage
Procedures may include:	• industry operating procedures • manufacturer guidelines, instructions, specifications or checklists • workplace procedures (work instructions, operating procedures and checklists)
Controls may include:	• hoisting and lowering levers • luffing levers • slewing levers including brake • emergency stop • travel
Service logbook includes:	• any logbook • history record system where the service and maintenance history is kept • service book
Crane safety devices may include:	• audible and visual warning devices • horns/sirens • lights • function limits
Communication equipment may include:	• two-way radios • whistles
Hazard prevention/control measures include one or more of the following:	• adequate illumination • disconnected power • insulated powerlines • removal of obstructions

	• pedestrian controls • personal protective equipment (PPE) • safety observer • safety tags on electrical switches/isolators • traffic barricades and controls
Test lift includes:	• 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: - adjustments to the slinging can be made in a safe manner - all equipment is functioning properly - load measuring equipment can be used to verify the calculated weight of the load - loads of unusual shape or weight distribution are correctly slung - near capacity loads do not overload the crane
Relevant crane movements may include:	• luffing • hoisting • slewing • travel
Communication signals include the following:	• hoist down - hand • hoist down - whistle • hoist up - hand • hoist up - whistle • luff boom down - hand • luff boom down - whistle • luff boom up - hand • luff boom up - whistle • stop - hand • stop - whistle • slew right - hand • slew right - whistle • slew left - hand • slew left - whistle • travel - hand
Best travel practice:	• minimum speed • gentle acceleration and braking (to minimise load swing) • minimum boom/jib radius • carrying the load near to the ground surface (where practical) • use of handheld taglines (where appropriate)

Unplanned and/or unsafe situations may include:	• environmental conditions (e.g. wind, lightning, storms, etc.) • failure of equipment (e.g. hydraulic system) • failure/loss of control (e.g. brakes and steering)
Shutdown includes the following:	• raising boom/jib to clear buildings, structures and vessels • retracting hoist rope and hook block • idling engine to stabilise temperature • applying weather vane mode • applying motion locks and brakes • turning off engine • removing key • locking and securing cabin
TLILIC0020 Licence to operate a slewing mobile crane (over 100 tonnes)	
Candidate Suitability and Pathways Advice: This unit is most suited to an individual who has attained a current National High-Risk Work Licence (HRWL) to perform dogging or a current certification for a specific VET course for HRWL to perform dogging that has been issued by, or on behalf of a work health and safety (WHS) regulator, and has experience in dogging work, although this is not a prerequisite nor a prohibitive requirement to undertake the unit. The candidate undertaking the unit should hold the relevant Heavy Vehicle Licence for operation of vehicle on road, although this is not a prerequisite nor a prohibitive requirement to undertake the unit. It is further recommended that candidates undertaking this unit should be able to provide evidence of current industry experience operating a slewing mobile crane with a Maximum Rated Capacity (MRC) greater than 20 tonnes for at least 600 hours within the last two years. Where candidates are undertaking the unit for the purposes of stevedoring industry operations, evidence of current industry experience operating a ships crane with a Maximum Rated Capacity (MRC greater than 20 tonnes for at least 240 hours, preferably 600 hours, within the last two years. Where candidates are undertaking the unit for the purposes of Australian Defence Force (ADF) operations by ADF military members, evidence of current industry experience operating a slewing mobile crane with a Maximum Rated Capacity (MRC greater than 20 tonnes for at least 240 hours, preferably 600 hours, within the last two years.	
Slewing Mobile Crane	• Slewing mobile cranes incorporate a boom or jib that can be rotated. It excludes front-end loader, back-hoe, excavator or other earth moving equipment when configured for crane operation. • Example:

	
Hazards may include:	• environmental conditions (e.g. wind, lightning, storms, etc.) • ground stability (e.g. ground condition, recently filled trenches and slopes) • insufficient lighting • other specific hazards (e.g. dangerous materials) • overhead hazards (e.g. powerlines and service pipes) • positioning of crane operator • traffic (e.g. pedestrians, vehicles and other plant)
Appropriate standards may include:	• Australian Standards especially AS 2550.1 Cranes, hoists and winches - Safe use - General requirements, and AS 2550.5 Cranes, hoists and winches – Safe use – Mobile cranes • codes of practice • industry standards • relevant legislation • manufacturer specifications
Associated personnel may include:	• doggers • riggers
Lifting equipment may include:	• chain slings • eyebolts • shackles • wire and synthetic slings
Communication methods may include:	• appropriate worksite protocol • hand signals • listening • questioning to confirm understanding • whistle signals • signage • verbal and non-verbal language

	written instructions
Signage and labels include one or more of the following:	- control labels - crane data plates/labels - crane decals - load charts - safety signage
Procedures may include:	- industry operating procedures - manufacturer guidelines, instructions, specifications or checklists - workplace procedures (work instructions, operating procedures, checklists)
Controls may include:	- boom extension levers - hoisting and lowering levers - luffing levers - slewing levers including brake - emergency stop
Service logbook includes:	- any logbook - history record system where the service and maintenance history is kept - service book
Crane safety devices may include:	- audible and visual warning devices - horns/sirens - operator restraint device - lights
Communication equipment may include:	- two-way radios - whistles
Ground may include:	- backfilled ground - bitumen - concrete - hard compacted soil - rock - rough, uneven ground - soft soils
Stability may include:	- correctly positioning plates or packing - deploying outriggers - establishing correct size plates or packing

Hazard prevention/control measures include one or more of the following:	• adequate illumination • disconnected power • insulated powerlines • removal of obstructions • pedestrian controls • personal protective equipment (PPE) • safety observer • safety tags on electrical switches/isolators • traffic barricades and controls
Load destination may include:	• ground • structures
Test lift includes:	• 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: - adjustments to the slinging can be made in a safe manner - all equipment is functioning properly - load measuring equipment can be used to verify the calculated weight of the load - loads of unusual shape or weight distribution are correctly slung - near capacity loads do not overload the crane
Relevant crane movements may include:	• luffing • travel • hoisting • operation of outriggers • boom/jib up and down • slew boom/jib • telescoping in and out
Communication signals include the following:	• hoist down - hand • hoist down - whistle • hoist up - hand • hoist up - whistle • luff boom down - hand • luff boom down - whistle • luff boom up - hand • luff boom up - whistle • stop - hand • stop - whistle • telescope in - hand

	- telescope in - whistle - telescope out - hand - telescope out – whistle - travel – hand
Unplanned and/or unsafe situations may include:	- environmental conditions (e.g. wind, lightning, storms, etc.) - failure of equipment (e.g. hydraulic system) - failure/loss of control (e.g. brakes and steering)
Shutdown includes the following:	- folding boom/jib into the transport position - idling engine to stabilise temperature - locking and securing cabin - removing key from ignition - retracting boom/jib - retracting hoist rope and hook block - retracting outriggers - securing crane for travel - turning off engine
Definition for Rated Capacity (RC) of the crane	the crane's RC is the maximum weight that it can lift in each configuration required for the work task
Definition for dynamic load	dynamic loads are time dependent (sic. on motion) and can be accelerating or deaccelerating, e.g. live load, water tank, bulk bag suspended from attachment hook, etc.
Weather conditions include:	- wind - lightning - rain - extreme heat - ultraviolet (UV) exposure
Definition for an asymmetric load	an object with an off-centre centre of gravity due to the object's irregular shape and/or composition
Problems and appropriate response procedures to unplanned and/or unsafe situations and environmental conditions include:	- wind, lightning and storms - failure of equipment, including hydraulic system - failure/loss of control, including brakes and steering - obstacles and obstructions - unusual or difficult terrains
TLILIC0021 Licence to operate a slewing mobile crane (up to 100 tonnes)	
Candidate Suitability and Pathways Advice: This unit is most suited to an individual who has attained a current National HRWL to perform dogging or a current certification for a specific VET course for HRWL to perform dogging that has been issued by, or on	

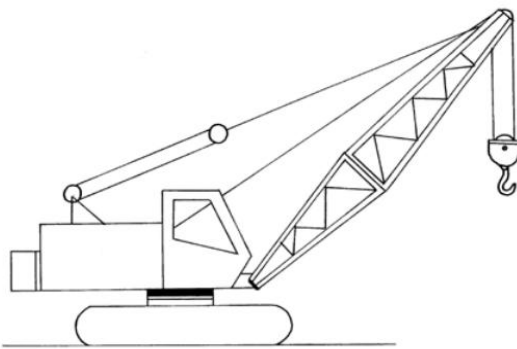
behalf of a WHS Regulator, and has experience in dogging work, although this is not a pre-requisite nor a prohibitive requirement to undertake the unit.

The candidate undertaking the unit should hold the relevant Heavy Vehicle licence for operation of mobile plant on road, although this is not a pre-requisite nor a prohibitive requirement to undertake the unit.

It is further recommended that candidates undertaking this unit should be able to provide evidence of current industry experience operating a slewing mobile crane with a Maximum Rated Capacity (MRC) greater than 20 tonnes for at least 600 hours within the last two years.

Where candidates are undertaking the unit for the purposes of stevedoring industry operations, evidence of current industry experience operating a ships crane with a Maximum Rated Capacity (MRC) greater than 20 tonnes for at least 240 hours, preferably 600 hours, within the last two years.

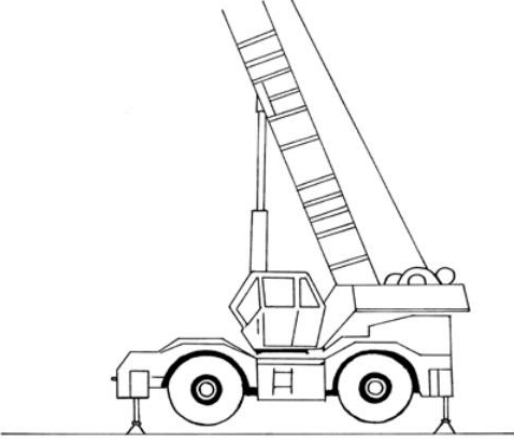
Where candidates are undertaking the unit for the purposes of Australian Defence Force (ADF) operations by ADF military members, evidence of current industry experience operating a slewing mobile crane with a Maximum Rated Capacity (MRC) greater than 20 tonnes for at least 240 hours, preferably 600 hours, within the last two years.

Slewing Mobile Crane	- Slewing mobile cranes incorporate a boom or jib that can be rotated. It excludes front-end loader, back-hoe, excavator or other earth moving equipment when configured for crane operation. - Example: 
Hazards may include:	- 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. powerlines and service pipes) - positioning of crane operator - traffic (e.g. pedestrians, vehicles and other plant)
Appropriate standards may include:	- Australian Standards especially AS 2550.1 Cranes, hoists and winches - Safe use - General requirements, and AS 2550.5 Cranes, hoists and winches – Safe use – Mobile cranes - codes of practice - industry standards - relevant legislation

	• manufacturer specifications
Associated personnel may include:	• doggers • riggers
Lifting equipment may include:	• chain slings • eyebolts • shackles • wire and synthetic slings
Communication methods may include:	• appropriate worksite protocol • hand signals • listening • questioning to confirm understanding • whistle signals • signage • verbal and non-verbal language • written instructions
Signage and labels include one or more of the following:	• control labels • crane data plates/labels • crane decals • load charts • safety signage
Procedures may include:	• industry operating procedures • manufacturer guidelines, instructions, specifications or checklists • workplace procedures (work instructions, operating procedures, checklists)
Controls may include:	• boom extension levers • hoisting and lowering levers • luffing levers • slewing levers including brake • emergency stop
Service logbook includes:	• any logbook • history record system where the service and maintenance history is kept • service book
Crane safety devices may include:	• audible and visual warning devices • horns/sirens • operator restraint device

	lights
Communication equipment may include:	- two-way radios - whistles
Ground may include:	- backfilled ground - bitumen - concrete - hard compacted soil - rock - rough, uneven ground - soft soils
Stability may include:	- correctly positioning plates or packing - deploying outriggers - establishing correct size plates or packing
Hazard prevention/control measures include one or more of the following:	- adequate illumination - disconnected power - insulated powerlines - removal of obstructions - pedestrian controls - personal protective equipment (PPE) - safety observer - safety tags on electrical switches/isolators - traffic barricades and controls
Load destination may include:	- ground - structures
Test lift includes:	- 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: - adjustments to the slinging can be made in a safe manner - all equipment is functioning properly - load measuring equipment can be used to verify the calculated weight of the load - loads of unusual shape or weight distribution are correctly slung - near capacity loads do not overload the crane
Relevant crane movements may include:	- luffing - travel - hoisting - operation of outriggers

	- boom/jib up and down - slew boom/jib - telescoping in and out
Communication signals include the following:	- hoist down - hand - hoist down - whistle - hoist up - hand - hoist up - whistle - luff boom down - hand - luff boom down - whistle - luff boom up - hand - luff boom up - whistle - stop - hand - stop - whistle - telescope in - hand - telescope in - whistle - telescope out - hand - telescope out – whistle - travel – hand
Unplanned and/or unsafe situations may include:	- environmental conditions (e.g. wind, lightning, storms, etc.) - failure of equipment (e.g. hydraulic system) - failure/loss of control (e.g. brakes and steering)
Shutdown includes the following:	- folding boom/jib into the transport position - idling engine to stabilise temperature - locking and securing cabin - removing key from ignition - retracting boom/jib - retracting hoist rope and hook block - retracting and pinning outriggers - securing crane for travel - turning off engine
Definition for Rated Capacity (RC) of the crane	the crane's RC is the maximum weight that it can lift in each configuration required for the work task
Definition for dynamic load	dynamic loads are time dependent (sic. on motion) and can be accelerating or deaccelerating, e.g. live load, water tank, bulk bag suspended from attachment hook, etc.
Weather conditions include:	- wind - lightning

	- rain - extreme heat - ultraviolet (UV) exposure
Definition for an asymmetric load	an object with an off-centre centre of gravity due to the object's irregular shape and/or composition
Problems and appropriate response procedures to unplanned and/or unsafe situations and environmental conditions include:	- wind, lightning and storms - failure of equipment, including hydraulic system - failure/loss of control, including brakes and steering - obstacles and obstructions - unusual or difficult terrains
TLILIC0022 Licence to operate a slewing mobile crane (up to 20 tonnes)	
Candidate Suitability and Pathways Advice: This unit is most suited to an individual who has attained a current National High-Risk Work Licence (HRWL) to perform dogging or a current certification for a specific VET course for HRWL to perform dogging that has been issued by, or on behalf of a work health and safety (WHS) regulator, and has experience in dogging work, although this is not a prerequisite nor a prohibitive requirement to undertake the unit. The candidate undertaking the unit should hold the relevant Heavy Vehicle Licence for operation of mobile plant on road, although this is not a prerequisite nor a prohibitive requirement to undertake the unit.	
Slewing Mobile Crane	- Slewing mobile cranes incorporate a boom or jib that can be rotated. It excludes front-end loader, back-hoe, excavator or other earth moving equipment when configured for crane operation. - Example: 
Hazards may include:	- 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. powerlines and service pipes) • positioning of crane operator • traffic (e.g. pedestrians, vehicles and other plant)
Appropriate standards may include:	• Australian Standards especially AS 2550.1 Cranes, hoists and winches - Safe use - General requirements, and AS 2550.5 Cranes, hoists and winches – Safe use – Mobile cranes • codes of practice • industry standards • relevant legislation • manufacturer specifications
Associated personnel may include:	• doggers • riggers
Lifting equipment may include:	• chain slings • eyebolts • shackles • wire and synthetic slings
Communication methods may include:	• appropriate worksite protocol • hand signals • listening • questioning to confirm understanding • whistle signals • signage • verbal and non-verbal language • written instructions
Signage and labels include one or more of the following:	• control labels • crane data plates/labels • crane decals • load charts • safety signage
Procedures may include:	• industry operating procedures • manufacturer guidelines, instructions, specifications or checklists • workplace procedures (work instructions, operating procedures and checklists)
Controls may include:	• boom extension levers • hoisting and lowering levers • luffing levers • slewing levers including brake

Service logbook includes:	• any logbook • history record system where the service and maintenance history is kept • service book
Crane safety devices may include:	• audible and visual warning devices • horns/sirens • operator restraint device • lights
Communication equipment may include:	• two-way radios • whistles
Ground may include:	• backfilled ground • bitumen • concrete • hard compacted soil • rock • rough, uneven ground • soft soils
Stability may include:	• correctly positioning plates or packing • deploying outriggers • establishing correct size plates or packing
Hazard prevention/control measures include one or more of the following:	• adequate illumination • disconnected power • insulated powerlines • removal of obstructions • pedestrian controls • personal protective equipment (PPE) • safety observer • safety tags on electrical switches/isolators • traffic barricades and controls
Load destination may include:	• ground • vehicles
Test lift includes:	• 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: - adjustments to the slinging can be made in a safe manner - all equipment is functioning properly - load measuring equipment can be used to verify the calculated weight of the load

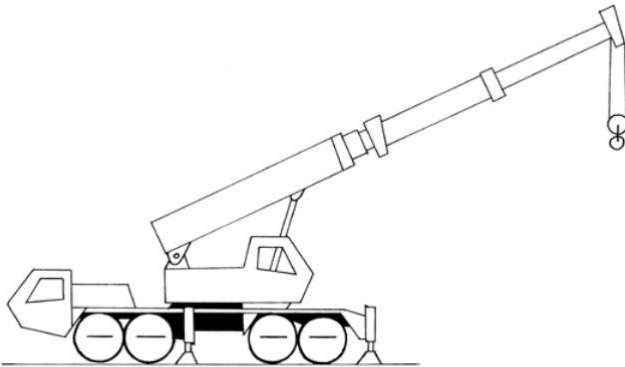
	- loads of unusual shape or weight distribution are correctly slung - near capacity loads do not overload the crane
Relevant crane movements may include:	• luffing • travel • hoisting • operation of outriggers • boom/jib up and down • slew boom/jib • telescoping in and out
Communication signals include the following:	• hoist down - hand • hoist down - whistle • hoist up - hand • hoist up - whistle • luff boom down - hand • luff boom down - whistle • luff boom up - hand • luff boom up - whistle • stop - hand • stop - whistle • telescope in - hand • telescope in - whistle • telescope out - hand • telescope out – whistle • travel – hand
Unplanned and/or unsafe situations may include:	• environmental conditions (e.g. wind, lightning, storms, etc.) • failure of equipment (e.g. hydraulic system) • failure/loss of control (e.g. brakes and steering)
Shutdown includes the following:	• folding boom/jib into the transport position • idling engine to stabilise temperature • locking and securing cabin • removing key from ignition • retracting boom/jib • retracting hoist rope and hook block • retracting and pinning outriggers • securing crane for travel • turning off engine •

Definition for Rated Capacity (RC) of the crane	the crane's RC is the maximum weight that it can lift in each configuration required for the work task
Definition for dynamic load	dynamic loads are time dependent (sic. on motion) and can be accelerating or deaccelerating, e.g. live load, water tank, bulk bag suspended from attachment hook, etc.
Weather conditions include:	- wind - lightning - rain - extreme heat - ultraviolet (UV) exposure
Definition for an asymmetric load	an object with an off-centre centre of gravity due to the object's irregular shape and/or composition
Unplanned and/or unsafe situations and environmental conditions include:	- wind, lightning and storms - failure of equipment, including hydraulic system - failure/loss of control, including brakes and steering - obstacles and obstructions - unusual or difficult terrains

TLILIC0023 Licence to operate a slewing mobile crane (up to 60 tonnes)
Candidate Suitability and Pathways Advice:

This unit is most suited to an individual who has attained a current National High-Risk Work Licence (HRWL) to perform dogging or a current certification for a specific VET course for HRWL to perform dogging that has been issued by, or on behalf of a work health and safety (WHS) regulator, and has experience in dogging work, although this is not a prerequisite nor a prohibitive requirement to undertake the unit.

The candidate undertaking the unit should hold the relevant Heavy Vehicle Licence for operation of mobile plant on road, although this is not a prerequisite nor a prohibitive requirement to undertake the unit.

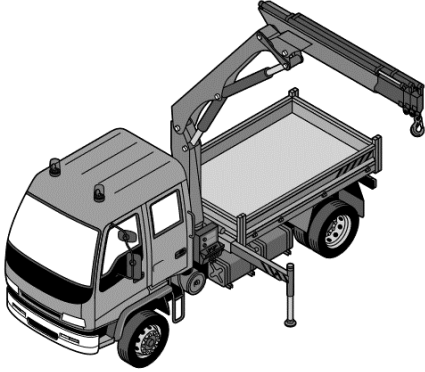
Slewing Mobile Crane	- Slewing mobile cranes incorporate a boom or jib that can be rotated. It excludes front-end loader, back-hoe, excavator or other earth moving equipment when configured for crane operation. - Example: 
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Hazards may include:	• environmental conditions (e.g. wind, lightning, storms, etc.) • ground stability (e.g. ground condition, recently filled trenches and slopes) • insufficient lighting • other specific hazards (e.g. dangerous materials) • overhead hazards (e.g. powerlines and service pipes) • positioning of crane operator • traffic (e.g. pedestrians, vehicles and other plant)
Appropriate standards may include:	• Australian Standards especially AS 2550.1 Cranes, hoists and winches - Safe use - General requirements, and AS 2550.5 Cranes, hoists and winches – Safe use – Mobile cranes • codes of practice • industry standards • relevant legislation • manufacturer specifications
Associated personnel may include:	• doggers • riggers
Lifting equipment may include:	• chain slings • eyebolts • shackles • wire and synthetic slings
Communication methods may include:	• appropriate worksite protocol • hand signals • listening • questioning to confirm understanding • whistle signals • signage • verbal and non-verbal language • written instructions
Signage and labels include one or more of the following:	• control labels • crane data plates/labels • crane decals • load charts • safety signage
Procedures may include:	• industry operating procedures • manufacturer guidelines, instructions, specifications or checklists

	workplace procedures (work instructions, operating procedures and checklists)
Controls may include:	- boom extension levers - hoisting and lowering levers - luffing levers - slewing levers including brake - emergency stop
Service logbook includes:	- any logbook - history record system where the service and maintenance history is kept - service book
Crane safety devices may include:	- audible and visual warning devices - horns/sirens - operator restraint device - lights
Communication equipment may include:	- two-way radios - whistles
Ground may include:	- backfilled ground - bitumen - concrete - hard compacted soil - rock - rough, uneven ground - soft soils
Stability may include:	- correctly positioning plates or packing - deploying outriggers - establishing correct size plates or packing
Hazard prevention/control measures include one or more of the following:	- adequate illumination - disconnected power - insulated powerlines - removal of obstructions - pedestrian controls - personal protective equipment (PPE) - safety observer - safety tags on electrical switches/isolators - traffic barricades and controls

Load destination may include:	• ground • structure
Test lift includes:	• 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: - adjustments to the slinging can be made in a safe manner - all equipment is functioning properly - load measuring equipment can be used to verify the calculated weight of the load - loads of unusual shape or weight distribution are correctly slung - near capacity loads do not overload the crane
Relevant crane movements may include:	• luffing • travel • hoisting • operation of outriggers • boom/jib up and down • slew boom/jib • telescoping in and out
Communication signals include the following:	• hoist down - hand • hoist down - whistle • hoist up - hand • hoist up - whistle • luff boom down - hand • luff boom down - whistle • luff boom up - hand • luff boom up - whistle • stop - hand • stop - whistle • telescope in - hand • telescope in - whistle • telescope out - hand • telescope out – whistle • travel – hand
Unplanned and/or unsafe situations may include:	• environmental conditions (e.g. wind, lightning, storms, etc.) • failure of equipment (e.g. hydraulic system) • failure/loss of control (e.g. brakes and steering)
Shutdown includes the following:	• folding boom/jib into the transport position • idling engine to stabilise temperature

	- locking and securing cabin - removing key from ignition - retracting boom/jib - retracting hoist rope and hook block - retracting and pinning outriggers - securing crane for travel - turning off engine
Definition for Rated Capacity (RC) of the crane	the crane's RC is the maximum weight that it can lift in each configuration required for the work task
Definition for dynamic load	dynamic loads are time dependent (sic. on motion) and can be accelerating or deaccelerating, e.g. live load, water tank, bulk bag suspended from attachment hook, etc.
Weather conditions include:	- wind - lightning - rain - extreme heat - ultraviolet (UV) exposure
Definition for an asymmetric load	an object with an off-centre centre of gravity due to the object's irregular shape and/or composition
Problems and appropriate response procedures to unplanned and/or unsafe situations and environmental conditions include:	- wind, lightning and storms - failure of equipment, including hydraulic system - failure/loss of control, including brakes and steering - obstacles and obstructions - unusual or difficult terrains
TLILIC0024 Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)	
Candidate Suitability and Pathways Advice: This unit is most suited to an individual who has attained a current National High-Risk Work Licence (HRWL) to perform dogging or a current certification for a specific VET course for HRWL to perform dogging that has been issued by, or on behalf of a work health and safety (WHS) regulator, and has experience in dogging work, although this is not a prerequisite nor a prohibitive requirement to undertake the unit. The candidate undertaking the unit should hold the relevant Heavy Vehicle Licence for operation of vehicle on road, although this is not a prerequisite nor a prohibitive requirement to undertake the unit.	
Vehicle Loading Crane	- A vehicle loading crane is a crane mounted on a vehicle for the purpose of loading and unloading items on or off the vehicle - Example:

	
Hazards may include:	• environmental conditions (e.g. wind, lightning, storms, etc.) • ground stability (e.g. ground condition, recently filled trenches and slopes) • insufficient lighting • other specific hazards (e.g. dangerous materials) • overhead hazards (e.g. powerlines and service pipes) • positioning of crane operator • traffic (e.g. pedestrians, vehicles and other plant)
Appropriate standards may include:	• Australian Standards especially AS 2550.1 Cranes, hoists and winches – Safe use – General requirements, and AS 2550.11 Cranes, hoists and winches – Safe use – Vehicle-loading cranes • codes of practice • industry standards • relevant legislation • manufacturer specifications
Associated personnel may include:	• doggers • riggers
Relevant personnel may include:	• site supervisor • site owner • goods receiver • doggers • riggers • other site personnel
Lifting equipment may include:	• chain slings • eyebolts • shackles • wire and synthetic slings • material cages • lifting clutches

	• spreader beams
Communication methods may include:	• appropriate worksite protocol • hand signals • listening • questioning to confirm understanding • signage • whistle signals • verbal and non-verbal language • written instructions
Signage and labels include one or more of the following:	• control labels • crane data plates/labels • crane decals • load charts • safety signage
Procedures may include:	• industry operating procedures • manufacturer guidelines, instructions, specifications or checklists • workplace procedures (work instructions, operating procedures and checklists)
Controls may include:	• boom extension levers • hoisting and lowering levers • knuckling levers • luffing levers • slewing levers including brake • emergency stop • stabiliser controls • isolation
Service logbook includes:	• any logbook • history record system where the service and maintenance history is kept • service book
Crane safety devices may include:	• audible and visual warning devices • horns/sirens • lights
Communication equipment may include:	• two-way radios • whistles
Ground may include:	• backfilled ground

	• bitumen • concrete • hard compacted soil • rock • rough, uneven ground • soft soils
Stability may include:	• correctly positioning plates or packing • deploying stabilisers • establishing correct size pads or packing
Hazard prevention/control measures include one or more of the following:	• adequate illumination • disconnected power • insulated powerlines • removal of obstructions • pedestrian controls • personal protective equipment (PPE) • safety observer • safety tags on electrical switches/isolators • traffic barricades and controls
Load destination may include:	• ground • vehicles
Test lift includes:	• 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: - adjustments to the slinging can be made in a safe manner - all equipment is functioning properly - load measuring equipment can be used to verify the calculated weight of the load - loads of unusual shape or weight distribution are correctly slung - work is performed within the Rated Capacity (RC) of the crane
Relevant crane movements may include:	• knuckling • luffing • hoisting • slewing • telescoping
Communication signals include the following:	• hoist down - hand • hoist down - whistle • hoist up - hand • hoist up - whistle

	• luff boom down - hand • luff boom down - whistle • luff boom up - hand • luff boom up - whistle • stop - hand • stop - whistle • telescope in - hand • telescope in - whistle • telescope out - hand • telescope out - whistle
Slings techniques means:	• the exercising of judgement in relation to the suitability and condition of lifting gear and the method of slinging, by consideration of the nature of the load, its mass and its centre of gravity.
Unplanned and/or unsafe situations may include:	• environmental conditions (e.g. wind, lightning, storms, etc.) • failure of equipment (e.g. hydraulic system) • failure/loss of control (e.g. brakes and steering)
Shutdown includes the following:	• folding boom/jib into the transport position • idling engine to stabilise temperature • locking and securing cabin • removing key from ignition • retracting boom/jib • retracting hoist rope and hook block • retracting and pinning stabilisers • securing crane for travel • turning off engine •

TLILIC0040 Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)
Candidate Suitability and Pathways Advice:

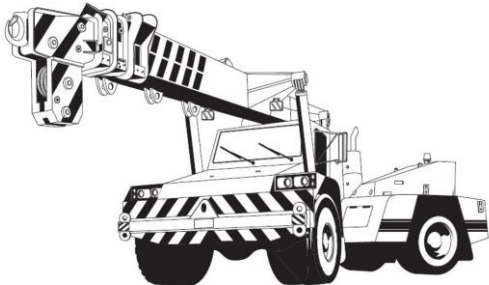
This unit is most suited to an individual who has attained a current National High-Risk Work Licence (HRWL) to perform dogging or a current certification for a specific VET course for HRWL to perform dogging that has been issued by, or on behalf of a work health and safety (WHS) regulator, and has experience in dogging work, although this is not a prerequisite nor a prohibitive requirement to undertake the unit.

The candidate undertaking the unit should hold the relevant Heavy Vehicle Licence for operation of the mobile plant on road, although this is not a prerequisite nor a prohibitive requirement to undertake the unit.

Assessment Environment Guidance:

The on-road practical components of the assessment for this unit should be assessed on a private road or site, however undertaking assessment on public roads is allowable, where appropriate licences are held.

Non-slewing Mobile Crane	• A non-slewing mobile crane is a powered mobile crane that incorporates a boom or jib which does not slew and includes an
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	articulated mobile crane or a locomotive crane but does not include vehicle tow trucks. Example:  oh
Hazards may include:	- environmental conditions (e.g. wind, lightning, storms, etc.) - ground stability (e.g. ground condition, recently filled trenches and slopes) - insufficient lighting - other specific hazards (e.g. dangerous materials) - overhead hazards (e.g. powerlines and service pipes) - traffic (e.g. pedestrians, vehicles and other plant)
Appropriate standards may include:	- Australian Standards especially AS 2550.1 Cranes, hoists and winches - Safe use - General requirements, and AS 2550.5 Cranes, hoists and winches – Safe use – Mobile cranes - codes of practice - industry standards - relevant legislation - manufacturer specifications
Associated personnel may include:	- doggers - riggers
Lifting equipment may include:	- chain slings - eyebolts - shackles - lifting clutches - wire and synthetic slings
Communication methods may include:	- appropriate worksite protocol - hand signals - listening - questioning to confirm understanding - whistle signals - signage

	• verbal and non-verbal language • written instructions
Signage and labels include one or more of the following:	• control labels • crane data plates/labels • crane decals • load charts • safety signage
Procedures may include:	• industry operating procedures • manufacturer guidelines, instructions, specifications or checklists • workplace procedures (work instructions, operating procedures and checklists) • calculating and applying slide-slope de-rating
Controls may include:	• boom extension levers • hoisting and lowering levers • luffing controls • emergency stop
Service logbook includes:	• any logbook • history record system where the service and maintenance history is kept • service book
Crane safety devices may include:	• audible and visual warning devices • horns/sirens • lights • operator restraint device
Communication equipment may include:	• two-way radios • whistles
Ground may include:	• backfilled ground • bitumen • concrete • hard compacted soil • rock • rough, uneven ground • soft soils
Stability may include:	• correctly positioning plates or packing
Hazard prevention/control measures include one or more of the following:	• adequate illumination • disconnected power

	- insulated powerlines - removal of obstructions - pedestrian controls - personal protective equipment (PPE) - safety observer - safety tags on electrical switches/isolators - traffic barricades and controls
Travel includes:	- test emergency steering and brakes - account for side slope de-rating - reversing downhill with a load - turning in turning out - minimise luff height (where practicable)
Turn-in and Turn-out explained:	When you need to change direction from driving straight, you perform a 'turn-in' (entering a turn) or a 'turn-out' (exiting a turn). For instance, making a right turn, changing lanes, or parking involves these manoeuvres.
Test lift includes:	- 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: - adjustments to the slinging can be made in a safe manner - all equipment is functioning properly - load measuring equipment can be used to verify the calculated weight of the load - loads of unusual shape or weight distribution are correctly slung - near capacity loads do not overload the crane
Relevant crane movements may include:	- articulating - hoisting - telescoping - travel
Communication signals include the following:	- hoist down - hand - hoist down - whistle - hoist up - hand - hoist up - whistle - luff boom down - hand - luff boom down - whistle - luff boom up - hand - luff boom up - whistle - stop - hand

	• stop - whistle • telescope in - hand • telescope in - whistle • telescope out - hand • telescope out – whistle • travel forward and reverse – hand • creep - hand
Unplanned and/or unsafe situations may include:	• environmental conditions (e.g. wind, lightning, storms, etc.) • failure of equipment (e.g. hydraulic system) • failure/loss of control (e.g. brakes and steering)
Shutdown includes the following:	• retracting boom/jib into the transport position • idling engine to stabilise temperature • locking and securing cabin • removing key from ignition • retracting hoist rope and hook block • securing crane for travel • turning off engine
Operational principles of an articulated mobile crane may include:	• Articulated Mobile Cranes are especially susceptible to stability issues due to their articulation • crane is steered by articulating around the centre pivot • capable of two wheel and four wheel drive operation • during road operations crane stability is dependant entirely on the crane's tyres • the front axle differential can be locked when operating in adverse conditions • articulated steering occurs through hydraulic cylinders providing the force required to articulate around a central pivot • should the hydraulic pump fail, there is a back up emergency pump
Driving hazards related to the vehicle characteristics of articulated mobile cranes and their controls includes:	• stowing the boom/jib during shut down, before moving the crane. • following all manufacturer's instructions and specifications when stowing the crane boom/jib • ensuring all loads are removed from the hook when the crane is shut down or left unattended • Securing the boom using the relevant motion locks and brakes, e.g. hoist lock • Securing the hook as per the manufacturer's specifications
Articulated mobile crane vehicle controls, instruments	• emergency engine shutdown • park brake

and indicators, and their use may include:	• crane control joystick • reversing camera screen • engine brake • cruise control on/off • cruise control set +/- • work lights • beacon • LMI/driving display • low ratio – transfer case • 4WD • front diff lock • override LMI • hold brake • ignition (key) • reverse (transmission) • neutral (transmission) • drive (transmission) • mode (transmission) • downshift (transmission) • upshift (transmission) • gear indicator display • crane/travel mode • suspension raise/lower • suspension automatic level • park headlights • hazard lamps • 12 V socket • steering wheel • horn, indicator, wipers/washer, high/low beam • brake pedal • accelerator pedal
Lateral instability is defined as:	• under particular circumstances an articulated crane can start to move side to side by a couple of inches and this can escalate to a point where the crane is swerving side to side more significantly (i.e. ‘fishtailing’). This condition has sometimes been referred to as “speed wobbles”
Lateral instability results in:	• lateral instability or “speed wobbles” can result in a loss of control and serious incidents. The driver’s responses, together with speed,

	that is accelerating instead of softly braking, and over-steering can cause the loss of control
Steering oscillation (in the event of speed wobbles) is controlled by:	• Where lateral instability occurs, you should remove your foot from accelerator. You should not: • brake harshly • accelerate • over correct • use two hands on steering • as these actions will increase the fishtailing
Emergency stopping includes:	• how to correctly and safely operate the vehicle, accounting for its unique performance characteristics, for example the impact that the vehicle's higher mass and higher centre of gravity have on normal driving activities such as braking (distance to stop) and cornering ability (avoiding roll situations)
Positioning and stopping includes:	• For on-road driving: • not exceeding any temporary maximum speed limit • using mirrors and get into the correct lane for the vehicle in good time and as signs direct • not switching lanes to overtake queuing traffic • taking extra care near cyclists and motorcyclists as they are vulnerable to skidding on grit, mud or other debris at road works • where lanes are restricted due to road works, merging in turn • not driving through an area marked off by traffic cones • watching out for traffic entering or leaving the works area, but not being distracted by what is going on there • concentrating on the road ahead • bearing in mind that the road ahead may be obstructed by works or by slow moving or stationary traffic • keeping a safe distance • seeking alternative routes where possible • keeping informed on road conditions prior to commencing a journey • For on-site driving: • obeying temporary speed zones and directions • observing worksite entry and exit points and allowing for longer distances needed for deceleration and acceleration into and out of traffic streams • exercising judgement to safely change lanes and when turning into the worksite • moving traffic and queued traffic entering or exiting the worksite • observing traffic controller providing directions

	• accounting for changing surface material and conditions e.g. solid road surface to loose stones or dirt that may involve slippery or uneven surfaces or excavations • accounting for vehicular traffic, pedestrians and workers • accounting for pedestrian and vehicle exclusion zones • using preferred communication methods e.g. two-way radios • using designated vehicle parking areas • meeting worksite induction requirements • using pilot or escort vehicles and directional routes • observing AMC height clearances e.g. low structures, overhead power lines • observing AMC width clearances e.g. narrow temporary routes • observing AMC length clearances e.g. stopping distances from rail tracks or other traffic • observing AMC weight restrictions e.g. bridges and temporary routes • compensating for poor visibility e.g. dust or smoke, darkness or blind spots • being aware of dangerous goods and flammable storage areas • using warning devices required e.g. flashing light, reversing alarm and lights • wearing seat belts at all times • preventing unauthorised use of the AMC • ensuring any night work has sufficient lighting • wearing appropriate PPE, including hi visibility clothing • when revisiting the same site be aware that conditions may have changed
Forward projection of the boom includes:	• correctly positioning and driving the vehicle on a road to account for the unique design of the vehicle, for example given the projection of the boom, how to safely navigate corners etc so the boom does not interfere with other traffic or strike infrastructure
Reversing includes:	• use of supervision and spotters • accounting for the effects of de-rating • creating exclusion zones to keep people out of the area where the vehicle will be operating (using signs, and permanent or temporary barriers) • checking that all mirrors are intact, functional, clean, and properly adjusted for the best view • checking that all reversing devices (if fitted) are functional, for example lights and alarms

	• checking that everyone nearby is aware that reversing is about to take place • reversing only if the way is clear • stopping reversing immediately if anyone disappears from view (including any spotters) • resuming reversing only when visual contact is restored with people and you have reconfirmed that the path is clear • checking both side mirrors repeatedly (and any other visual aids such as cameras)
Steering and manoeuvring includes recognising and accounting for:	• Articulated Mobile Cranes have 'frame steering'. They steer by bending the crane in the middle, which in effect turns the front wheels in relation to the rear wheels. A driver of an articulated mobile crane does not steer with the front wheels. The driver is physically and rapidly rotated with the cabin in the direction of steering. This leads to a different sensation by the crane driver. • the lack of feedback in the steering wheel means that the steering wheel can be turned very quickly with little effort. This can lead to over-steering (i.e. where the driver's steering over-corrects and turns too far) • in articulated mobile steering cranes, when the steering wheel is released, the steering does not straighten up. This means that the driver must always remain very attentive and active with their steering, and use turn-in turn-out techniques • the suspension on articulated mobile cranes is harsh. This means every bump and undulation in the road is felt by the driver
Manage vehicle speed includes:	• driving the Articulated Mobile Crane in accordance with the National Class 1 Special Purpose Vehicle Notice 2016 (No 1) Amendment Notice 2018 (No. 1) which introduces a speed limit on pick and carry cranes, whereby under the National Class 1 Special Purpose Vehicle Notice 2016 (No 1) the State Schedules for Victoria, Queensland, South Australia and Tasmania now state: "A pick and carry crane must not exceed 80 kph" • accounting for the effect of speed on cornering stability, braking distance and impact forces are all made worse by increased speed • recognising that cornering forces don't just double when the vehicle speed doubles, they increase by four times
Low risk driving techniques may include:	• applying control measures for road driving which may include: - checking tyre pressure - storing loose components in storage areas - engaging road travel mode - removing hook

	- restraining the boom and fall block to ensure there is no unintended movement of the boom or hook • remove all hooks and pins, check spreader bar brackets are installed correctly and the spreader bar is secure, retract boom and fall block fully and set boom at approx. 0 degrees. • set travel/crane mode: the travel/crane mode switch must be set to the “travel” position for driving on public roads or at high speed. In this mode the engine and transmission respond like a typical heavy vehicle to throttle inputs. The crane functions will be disabled • “crane” mode can only be engaged with the transfer case in low range, and should only be used while performing crane duties • if it is necessary to operate the crane functions while not in crane mode (e.g. lower the boom for clearance) pressing the “overload override” switch will allow momentary use of the control levers • ensure 2WD and HIGH range is selected on the rocker switches • ensure the holding brake valve lever is in the centre position to release brake, and also disengage the front axle cross lock • push park brake button in to release the brake • proceed to drive as a normal heavy vehicle, with the following extra caution: the crane’s boom extends significantly in front of the crane cabin and main body. Always check the boom is fully retracted before driving. Exercise extreme caution at intersections and driveways and ensure that the boom does not protrude into the path of other traffic • do not operate with front axle cross lock or 4WD engaged on hard surfaces • do not shift from high/low range or low/high range, unless the crane is stationary and in neutral. The transfer case high/low and 2/4WD selection is fitted with a control system that will only allow selection if these conditions are met • do not shift from forward to reverse or reverse to forward, unless the crane is stationary • if you shift from neutral to drive or reverse with the accelerator depressed, the transmission will only engage if the pedal is released in the next three seconds, otherwise it will remain in neutral. Avoid selecting forward or reverse with the accelerator depressed • 4WD may be selected in either high/low range, but it is not advisable to use at high speeds • front axle differential cross lock will only be engaged once low range is engaged and will disengage if holding brake is applied • differential cross lock must not be used on hard surface • it is allowable to use both 4WD and differential cross lock in conjunction in rugged terrain
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	• look out for overhead wires, pole stay wires and height restricted bridges and tunnels • account for the effects of a high centre of gravity that increases the risk of roll-over
Traffic management plan is defined as:	• a traffic management plan can help communicate how traffic is managed at a site • a traffic management plan may include details of the desired flow of pedestrian and vehicle movements; the expected frequency of interaction of vehicles and pedestrians; illustrations of the layout of barriers, walkways, signs and general arrangements to warn and guide traffic around, past, or through a work site or temporary hazard; site speed limits; and, how short term, mobile work and complex traffic situations will be managed • a traffic management plan could also set out responsibilities of people managing traffic in the workplace; responsibilities of people expected to interact with traffic in the workplace; and instructions or procedures for controlling traffic, including in an emergency
Pre-operational checks carried out on articulated mobile crane prior to driving on road include:	• Planning for safe operation of an articulated mobile crane on public roads requires to: • anticipate and monitor traffic hazards particular to an articulated mobile crane and undertaking appropriate route planning • applying precautions and required action to eliminate, minimise or control identified hazards such as anticipated driving hazards • carrying out pre-operational vehicle checks, including: - checking: - brakes - operation of vehicle lights and indicators - tyre pressures - load restraint - boom and hook - performing emergency steering pump function check: - park the crane on level ground - start the engine, apply the foot brake and release the park brake. The emergency steering pump should not operate - with the ignition key remaining on, shut down the engine using the engine stop switch - check the operation of the emergency steering pump for function and warning indication - start the engine again

	- the emergency steering pump and warning should continue to operate until the park brake is applied. Avoid running the electric pump for extended periods of time as the motor may overheat • visually checking vehicle for roadworthiness
Relevant national and state/territory driver licensing authority road rules, regulations, permit and licence requirements related to articulated mobile crane operation are applied as:	• different states and territories have different heavy vehicle licensing requirements to operate an articulated crane • operators should ensure they hold the correct heavy vehicle driver licence in the state or territory they are operating • while not required for driving on public roads, a Non-Slewing Mobile Crane High Risk Work Licence may be required for operators using the articulated crane for lifting tasks. High Risk Work Licences are issued by the relevant Workplace Health and Safety Regulator in each State or Territory. • knowledge of the roads the vehicle is permitted to operate on and any special travel conditions, such as the need to tether the boom when travelling in road tunnels • configuration of the vehicle to ensure mass compliance when travelling on roads, such as the need to position removeable counterweights correctly • road speed limitations imposed by either the manufacturer or regulator, which are in addition to sign posted speed limits
TLILIC2014 Licence to drive a light rigid vehicle	
Light rigid vehicle includes one of the following:	• rigid bus with less than or equal to 8 tonnes GVM or seats more than 12 adults, including driver • rigid truck above 4.5 tonnes GVM but less than or equal to 8 tonnes GVM
Vehicle handling procedures include:	• accelerating and braking • managing engine performance • operating vehicle controls, instruments and indicators • positioning and stopping a vehicle • reversing a vehicle • starting a vehicle • steering and manoeuvring a vehicle • using defensive driving techniques
Pre-operational inspections and equipment checks include:	• brakes • checking and topping up fluid levels • checking: - operation of vehicle lights and indicators - tyre pressures - visually checking vehicle

TLILIC2015 Licence to drive a medium rigid vehicle	
Medium rigid vehicle includes one of the following:	• two axle bus above 8 tonnes GVM • two axle rigid truck, not being a prime mover, above 8 tonnes GVM
Vehicle handling procedures include:	• accelerating and braking • managing engine performance • operating vehicle controls, instruments and indicators • positioning and stopping a vehicle • reversing a vehicle • starting a vehicle • steering and manoeuvring a vehicle • using defensive driving techniques
Pre-operational inspections and equipment checks may include:	• brakes • checking and topping up fluid levels • checking: - operation of vehicle lights and indicators - tyre pressures - visually checking vehicle
TLILIC2016 Licence to drive a heavy rigid vehicle	
Vehicle handling procedures may include:	• accelerating and braking • managing engine performance • operating vehicle controls, instruments and indicators • positioning and stopping a vehicle • reversing a vehicle • starting a vehicle • steering and manoeuvring a vehicle • using defensive driving techniques
Driving hazards may include:	• animals and objects on road • brakes • faulty: • fire in vehicle • flooded sections of road • foggy conditions • leaking fuel • oil on road • parked vehicles on road • pedestrians crossing road

	- steering mechanism on vehicle - wet and iced roads - windy sections of road
Traffic and road conditions may include:	- negotiating a range of more complex traffic infrastructure (such as roundabouts, traffic lights, stalemate intersections, railway level crossings) - on open or private roads including roads with moderate inclines and declines - operations conducted during the day or night - typical weather conditions - while at a client workplace or worksite - while at a depot, base or warehouse
Pre-operational inspections and equipment checks may include:	- brakes - checking and topping up fluid levels - checking: - operation of vehicle lights and indicators - tyre pressures - visually checking vehicle
TLILIC3017 Licence to drive a heavy combination vehicle	
Heavy combination vehicle includes one of the following:	- heavy rigid vehicle towing a trailer - trailer must have at least two axles and a GVM of 12 tonnes or more - prime mover with a minimum of three axles and a semi-trailer with a minimum of two axles - vehicle must have a GVM rating of at least 24 tonnes
Vehicle handling procedures include:	- accelerating and braking - managing engine performance - operating vehicle controls, instruments and indicators - positioning and stopping a vehicle - reversing a vehicle - starting a vehicle - steering and manoeuvring a vehicle - using defensive driving techniques
Pre-operational inspections and equipment checks may include:	- brakes - checking and topping up fluid levels - checking: - operation of vehicle lights and indicators - tyre pressures - visually checking vehicle

TLILIC3018 Licence to drive a multi combination vehicle	
Multi-combination vehicle includes one of the following:	- heavy combination B-double rated vehicle at least 22 metres in length with more than one trailer, which has all pertinent documentation permits etc. - three axle prime mover with an A and B trailer each with bogie axles
Vehicle handling procedures include:	- accelerating and braking - managing engine performance - operating vehicle controls, instruments and indicators - positioning and stopping a vehicle - reversing a vehicle - starting a vehicle - steering and manoeuvring a vehicle - using defensive driving techniques
Pre-operational inspections and equipment checks may include:	- brakes - checking and topping up fluid levels - checking: - operation of vehicle lights and indicators - tyre pressures - visually checking vehicle