



Australian Government

TLILIC0011 Licence to operate a reach stacker (greater than 3 tonnes capacity)

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit specifies the skills and knowledge required to operate a reach stacker with a Maximum Rated Capacity (MRC) exceeding 3 tonnes safely, in accordance with all relevant legislative responsibilities. Competence in this unit, does not in itself result in a HRWL licence to operate this plant.

Reach stacker means a powered reach stacker that incorporates an attachment for lifting and lowering a shipping container.

This unit applies to the activities of a person operating a reach stacker greater than 3 tonnes capacity that incorporates an attachment for lifting, moving and travelling with a shipping container (not including a shore based container handling gantry crane).

A person performing this work is required to hold a reach stacker High-Risk Work Licence (HRWL)

This unit requires a person operating reach stacker with an MRC exceeding 3 tonnes to:

- plan the work/task
- prepare for the work/task
- perform work/task
- Pack up

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit of competency.

This unit is based on the licensing requirements of Part 4.5 of the Model Work Health and Safety (WHS) Regulations and meets Commonwealth, State and Territory HRWL requirements.

The National Assessment Instrument (NAI) is the mandated assessment for the HRWL to operate the relevant licencing class as detailed in this unit.

Pre-requisite Unit

Not applicable

Competency Field

LIC - Licencing Units

Unit Sector

Not applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan work/task

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Task requirements are identified from work orders or equivalent and confirmed with relevant people and site inspection is conducted in accordance with workplace procedures
- 1.2** Work area operating surface is assessed to determine the quality of ground suitability for operational use of reach stacker in accordance with workplace procedures
- 1.3** Reach stacker MRC and Spreader/lifting gear Work Load Limit (WLL) is established for the Container/s and work/task requirements in accordance with manufacturer specifications and workplace procedures
- 1.4** Appropriate paths for operating the reach stacker and moving and placing container/s in work area are assessed and determined in accordance with workplace procedures
- 1.5** Relevant hazard identification and risk elimination/control measures are applied and advised to relevant person/s in accordance with workplace procedures
- 1.6** Traffic management plan implementation is confirmed and understood in accordance with workplace procedures
- 1.7** Appropriate communication procedures are identified and tested with associated personnel in accordance with workplace procedures

- 1.8** All tasks are confirmed to ensure requirements for the relevant work area is in accordance with workplace procedures
- 2 Prepare for work/task**
- 2.1** Consultation with workplace personnel is established and maintained to ensure workplan is clear and consistent with site requirements in accordance with workplace procedures
- 2.2** Risk control measures for hazards identified are checked for implementation in accordance with legislative responsibilities and safe work procedures
- 2.3** Reach stacker is accessed in a safe manner in accordance with manufacturer specifications and safe work procedures
- 2.4** Pre-start reach stacker checks are carried out and any damage and defects are reported, recorded and appropriate action is taken in accordance with manufacturer requirements and safe work procedures
- 2.5** Reach stacker is started and is checked for any abnormal noises/operation in accordance with manufacturer requirements and safe work procedures
- 2.6** Operational checks are carried out and any damage and defects are reported, recorded and appropriate action is taken in accordance with manufacturer specifications and safe work procedures
- 2.7** Reach stacker stability requirements for task are determined in accordance with relevant manufacturer specifications and safe work procedures
- 2.8** Reach Stacker logbook is checked to confirm current compliance, is correct for the reach stacker type, is completed and signed and required rectifications have been signed off in accordance with manufacturer requirements and safe work procedures
- 2.9** Weather and work environment conditions are assessed to determine any impact on reach stacker operations in accordance with manufacturer requirements and safe work procedures

- 2.10** Reach stacker is driven to work area and prepared for container operations in accordance with relevant safe work procedures
- 3 Perform work/task**
- 3.1** Container lifts are determined within MRC of the reach stacker in accordance with safe work procedures
- 3.2** Container spreader is safely positioned over container following directions from associated personnel (if applicable) in accordance with safe work procedures
- 3.3** Container spreader is latched onto container and reach stacker is stabilised appropriately in accordance with safe work procedures
- 3.4** Test lift is carried out in accordance with safe work procedures
- 3.5** Containers are mobiled safely using best mobile practice and relevant reach stacker movements in accordance with safe work procedures
- 3.6** Container and reach stacker movement is monitored constantly and operated in accordance with safe work procedures and manufacturer specifications
- 3.7** All required communications signals are correctly interpreted, used and followed whilst reach stacker is operated in accordance with safe work procedures
- 3.8** Container is lowered and landed safely in accordance with safe work procedures
- 3.9** Container spreader is disconnected from container and positioned safely and efficiently for next task in accordance with safe work procedures
- 4 Pack up**
- 4.1** Reach stacker boom and container spreader are secured as required in accordance with manufacturer specifications and safe work procedures

- 4.2 Relevant motion locks and brakes are applied as required in accordance with manufacturer specifications, safe work procedures
- 4.3 Stabilisers (if fitted) are raised and secured in accordance with manufacturer specifications, safe work procedures
- 4.4 Reach stacker is parked to avoid hazards and shut down in accordance with safe work procedures
- 4.5 Post-operational reach stacker checks are carried out in accordance with manufacturer specifications, legislative responsibilities and safe work procedures
- 4.6 Reach stacker is secured to prevent unauthorised access/use in accordance with legislative obligations, responsibilities, safe work procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non -essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLILIC3019 Licence to operate a reach stacker (greater than 3 tonnes capacity).

Links

Companion Volume Implementation Guide -

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

Assessment Requirements for TLILIC0011 Licence to operate a reach stacker (greater than 3 tonnes capacity)

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- applying mathematical procedures in conjunction with reach stacker load chart to determine:
 - radius requirements
 - container stack height
 - ability to perform work/task
- applying best mobile practice including:
 - allowing for boom deflection
 - carrying container near to ground surface
 - container spreader as low as possible
 - gently accelerating and braking
 - minimising boom length
 - minimising speed as applicable to reach stacker stability
- assessing suitability of planned route for reach stacker and ensuring appropriate path is in accordance with traffic management plan and is:
 - clear of obstacles
 - clear of personnel
 - free of ramps or inclines
- checking container weights to ensure they are within reach stacker capacity in accordance with range diagram/container chart
- communicating with other workplace personnel through using appropriate worksite protocols which must include:
 - 2-way radio
 - active listening
 - demonstrating and interpreting hand signals
 - questioning to confirm understanding
 - signage/visual aids
 - whistles
 - written instructions
- completing the pre-start operational check including:

- battery power level as required by manufacturer specifications
- checking safety equipment
- checking signage and labels to ensure they are visible and legible
- engine / mechanical fluid level checks as required by manufacturer specifications
- presence of correct logbook
- evidence of damage
- fluid leaks
- lights work effectively
- adjusting mirrors, seat and seat belt appropriately
- locating, identifying and confirming all controls
- setting up of machine/spreader
- tyres and wheels for damage and correct inflation
- updating records as required
- checking for signs of paint separation and stressed welds indicating potential structural weakness
- completing operational checks, which must ensure:
 - determining any defects or faults with operation of reach stacker
 - hazard warning systems including reversing beepers, latch on lights and horns are functional
 - locating, identifying and testing all controls for functionality and operation to maximum extension including:
 - articulating (if applicable)
 - booming up and down
 - ensuring movements and control functions are smooth and comply with operating requirements
 - equalising spreader
 - extending/retracting spreader
 - rotating spreader
 - telescoping in and out
 - steering, transmission and brake functions comply with operating requirements
 - safety devices as fitted
 - start-up is in accordance with procedures
 - there are no unusual noises
- communicating with other workplace personnel through:
 - appropriate worksite procedures
 - listening
 - questioning to confirm understanding
 - two-way radios
- complying with Commonwealth, state and territory Work Health and Safety (WHS)/Occupational Health and Safety (OHS)/Occupational Safety and Health (OSH) legislation

- conducting and applying risk and hazard assessment strategies including:
 - confirming work area operating surface suitability based on reach stacker and task requirements
 - potential of dislodging other containers in vicinity of task
 - insufficient lighting
 - overhead hazards including electric lines and service pipes
 - reach stacker instability due to:
 - dynamic loads
 - ground conditions including condition of surface and slopes
 - impact of tyre inflation/condition
 - overloading
 - pick and placement of load
 - asymmetric loads in container
 - restricted and poorly ventilated areas
 - the risk of collision with people, moving plant and fixed structures
 - weather conditions
- confirming and following traffic management plan procedures relevant to their role in the work area
- confirming weight of containers identified for task/job in consultation with associated personnel
- ensuring risk control measures within the work area are effective as per workplace procedures
- inputting container data into reach stacker computer as required and checking operation to accurately reflect reach stacker
- interpreting and confirming relevant documentation for the work task and relevant area
- gently accelerating and braking and including:
 - minimum boom length
 - minimum speed
 - reach stacker stability
- lowering container safely including:
 - onto ground taking into consideration swing and restrictions of area
 - container stack taking into consideration alignment with other containers and stability of stack
 - rail car or truck trailer taking into consideration alignment to corner casting position/alignment with relevant locking device on tray
- maintaining three points of contact whilst accessing reach stacker
- monitoring container disconnection from spreader and ensuring pin locks unlatch from corner castings
- observing relevant communication signals from associated personnel
- observing stability of stack and container
- operating a reach stacker greater than 3 tonnes capacity to lift and move containers through an obstacle course including a 90-degree turn in reverse, using all functions to their

maximum extension and safe working rated capacity whilst applying relevant reach stacker movements in full view of the operator including the following tasks:

- lifting a container of 50% of the configuration of the MRC of reach stacker, and
- stacking container at least 3 high,
- ensuring spreader land lights are correct, container is latched on and that lock pins are engaged before taking lift
- ensuring container comes away from surface and is not locked to deck of rail car and/or truck trailer
- correctly positioning boom and spreader over corner castings of container
- lifting, moving and travelling with a shipping container
- articulating
- booming up and down
- equalising spreader
- extending/retracting spreader
- rotating spreader
- telescoping in and out
- positioning reach stacker in relevant area for next task
- receiving, interpreting and applying workplace instructions, safety information, emergency procedures
- reporting to relevant person/s on site risk control measures that are not in place or deficient
- receiving and interpreting workplace instructions, safety information and emergency procedures
- recording and maintaining accurate information relating to reach stacker operations
- shutting down a reach stacker, greater than 3 tonnes capacity in accordance with manufacturer specifications and safe work procedures
- stabilising reach stacker by:
 - applying computer stability reading as a percentage
 - deploying stabilisers if fitted
- test-lifting container just clear of lifting plane to allow for checks ensuring:
 - all reach stacker hydraulic controls and brake systems are functioning properly
 - boom length and height are displayed correctly
 - computer/weight scale is working correctly
 - computer correctly displays stability percentage of reach stacker
- using and interpreting reach stacker manufacturer specifications and data, including load charts, to enable reach stacker to be configured including:
 - boom length
 - use of stabilisers (where fitted)
- using communications signals including:
 - luff boom down – hand signals and two-way radio
 - luff boom up – hand signals and two-way radio
 - stop – hand signals and two-way radio

- telescope out – hand signals and two-way radio
- telescope in – hand signals and two-way radio

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- appropriate worksite communication procedures including:
 - listening
 - hand signals
 - questioning techniques
 - signage
 - two-way radios
 - written instructions
 - whistles
- reach stacker crane chart and manufacturer requirements
- lift impacting factors including:
 - centre of gravity
 - dynamic nature of load
 - flex/deflection of boom
 - length
 - radius of lift
 - weight
- hazards including:
 - ground stability including ground condition, recently filled trenches and slopes
 - insufficient lighting
 - obstacles or obstruction
 - other specific hazards and dangerous materials
 - overhead hazards including:
 - electric lines
 - service pipes
 - structures
 - vegetation (trees)
 - traffic including pedestrians, vehicles and other plant
 - operations on unusual, uneven or difficult terrains
- impact of factors affecting reach stacker stability including:
 - overloading
 - poor container placement
 - unbalanced container
 - articulation of reach stacker

- tyre deflation/condition
- manufacturer requirements on stabiliser procedures
- manufacturer requirements and instructions on shutting down reach stacker
- reach stacker characteristics and capabilities including spreader operation
- reach stacker configuration mathematical calculations to:
 - estimate loads
 - reach requirements
- relevant workplace instructions, safety information, emergency procedures
- relevant documentation requirements and procedures for recording, reporting and maintaining workplace records and information
- risk assessment management and mitigation strategies including hierarchy of control:
 - elimination
 - substitution
 - isolation
 - engineering controls
 - administrative controls
 - personal protective equipment (PPE)
- roles and responsibilities of duty holders as per legislative obligations Work Health and Safety (WHS)/Occupational health and Safety (OHS) requirements and safe work/workplace procedures
- prestart and operational checks required for a reach stacker
- problems and equipment faults, and application of appropriate response procedures to unplanned and/or unsafe situations
- starting procedure of reach stacker as per manufacturer requirements
- weather bureau forecasts and environmental conditions that could impact operation including:
 - lightning
 - wind
 - water on ground
 - Ultra Violet (UV) exposure (sun glare)
- workplace standards, requirements, policies and procedures for conducting operations for the mobile reach stacker
- work area suitability based on relevant ground reports including:
 - backfilled ground
 - bitumen
 - concrete
 - hard compacted soil
 - pre-contaminated soils
 - rock
 - rough uneven ground
 - soft soils

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

- Simulators must not be used in the assessment of this unit of competency.

Resources for assessment that must include access to:

- Reach stacker with a MRC greater than 3 tonnes in safe/serviceable working order in accordance with manufacturer requirements with a container spreader including:
 - rotation device to rotate container
 - appropriate extension for various length containers
 - side-shift to balance/equalise container
 - twist locks to engage and disengage the container
- appropriate container loads as outlined in the performance evidence requirements
- communications equipment including:
 - two-way radios
 - whistles
- relevant personal protective equipment (PPE)
- relevant documentation for operating a reach stacker over 3 tonnes including:
 - approved codes of practice and guidance
 - Australian Standards
 - checklists
 - safe work operating procedures
 - relevant industry standards (where applicable)
 - logbook
 - manufacturer guidelines (instructions, specifications or checklists)
 - relevant workplace documentation
- range of diagrams that include:
 - container dimensions
 - height of container stack
 - maximum reach
 - maximum weight

Links

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