Australian Government

Assessment Requirements for TLILIC0008 Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)

Release: 2

Assessment Requirements for TLILIC0008 Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in unit Application
- Minor statement changes in Assessment Conditions.

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 relevant mathematical calculations in conjunction with lift plan and load chart, radius requirements and relevant lifting gear to perform work/task to enable crane to be configured for load including:
  - boom
  - fly-jib (where fitted)
  - line pull
  - mobiling
  - type of hook
  - side slope derations
  - articulation derations
- applying relevant crane movements including:
  - boom/jib up and down (luffing)
  - positioning and using main and auxiliary hook and lifting gear to connect to load safely
  - raise and lower hoist
  - telescope in and out
  - travel and articulating (as required)
- communicating with other workplace personnel through using appropriate worksite procedures including:
  - 2-way radio
  - listening
  - making and interpreting hand signals
  - questioning to confirm understanding
  - signage

  - verbal language
  - visual aids
  - whistles
  - written instructions
- complying with Commonwealth, state and territory Work Health and Safety (WHS)/Occupational Health and Safety (OHS)/Occupational Safety and Health (OSH) legislation and safe work procedures
- completing the pre-start check including:
  - battery power level as required by manufacturer requirements
  - engine / mechanical fluid level checks as required by manufacturer requirements
  - presence of correct logbook
  - evidence of damage
  - fluid leaks
  - lights work effectively
  - locating, identifying and confirming all controls
  - mirrors and seat are adjusted appropriately
  - safety equipment checks
  - signage and labels to ensure they are visible and legible
  - checking for signs of paint separation and stressed welds indicating potential structural weakness
  - tyres and wheels for damage/wear and correct inflation (Water/Air)
  - updating records as required
  - visual damage or equipment faults
- conducting and applying risk and hazard strategies including:
  - confirming work area operating surface suitability based on crane and task requirements
  - articulation of crane
  - dynamic loads
  - ground conditions including surface and slopes
  - impact of tyre inflation/condition
  - load swing
  - overloading
  - pick and placement of load
  - asymmetric loads
  - overhead hazards
  - restricted site/s and poorly ventilated area/s
  - risk of collision with people, moving plant and fixed structures
  - adequate lighting
  - weather conditions
- completing operational checks ensuring:
  - all controls are located, identified and tested for functionality

- all hydraulic functions are operated
- lifting gear movements and control functions are smooth and comply with lift plan
- hazard warning systems, safety, audible and visual warning devices are checked to ensure they are functional including:
  - reversing beepers
  - lights
  - horns
  - crane computer alarm (where fitted)
  - anti-two block alarms (where fitted)
- start-up is in accordance with manufacturer requirements and workplace procedures
- there are no unusual noises
- steering, transmission and brake functions comply with operating requirements

- confirming and following traffic management plan procedures relevant to crane operator role in the work area
- determining any defects or faults with operation of crane and reporting to relevant person/s
- ensuring risk control measures within the work area are effective as per workplace procedures
- ensuring stability of load and avoidance of hazards by applying best mobile practice including:
  - allowing for boom deflection
  - boom/jib as low as possible
  - boom/jib in line with crane
  - carrying load near to ground surface
  - crane stability whilst manoeuvring load into position with drive/steering wheels and articulating as required
  - gently accelerating and braking to minimise load swing
  - lowering load safely and stably onto appropriate dunnage taking into consideration swing and restrictions of area
  - minimum boom/jib length
  - minimum speed
  - using handheld taglines/bridling
- following directions of dogger or rigger
- interpreting and confirming relevant documentation for the work task and relevant area
- inputting crane configuration into crane computer (where fitted) and checking operation to accurately reflect crane configuration
- interpreting and acting on communications signals including:
  - hoist down - hand and whistle and radio
  - hoist up - hand and whistle and radio
  - luff boom down - hand and whistle and radio
  - luff boom up - hand and whistle and radio
  - articulate left - hand and whistle and radio

  - articulate right - hand and whistle and radio
  - stop - hand and whistle and radio
  - telescope in - hand and whistle and 2-way radio (where manufacturer requirements allow)
  - telescope out - hand and whistle and 2-way radio (where manufacturer requirements allow)
  - travel - hand and radio
- maintaining three points of contact whilst accessing crane and ensure rungs / steps are free of hazards
- monitoring load disconnection from hook is safe and ensuring no movement of controls
- observing relevant communication signals from relevant person
- operating an articulated non-slewing mobile crane with a rated capacity (RC) of 12 tonnes or greater to lift four different loads using the main hook through an obstacle course using all crane operational controls while the load is in full view of the crane operator. Loads must consist of:
  - a load of >50% of the Rated Capacity (RC) of the crane with a boom length of >75%, and
  - a round load with a minimum diameter of 300 mm and minimum length of 3 m that requires a dogger to sling, and
  - an asymmetrical load that requires a dogger to sling, and
  - travelling with a load of stillage containing at least ten scaffolding standards or containing a load of steel pipes of equivalent weight that requires a dogger to sling and a boom length of <75%
- positioning the non-slewing mobile crane for safe operation for:
  - application of the task
  - manoeuvring in the workplace
  - aligning of crane boom to the load
  - stability of the non-slewing mobile crane and the load whilst driving to load set down position
- recording and maintaining accurate information relating to crane operations
- reporting to relevant person/s on site risk control measures that are not in place or deficient
- setting up of:
  - fly jib (where fitted)
  - manual boom section (where fitted)
- setting up and validating an exclusion zone
- shutting down a non-slewing mobile crane in accordance with manufacturer requirements and workplace procedures
- stabilising a non-slewing mobile crane for operation by ensuring level and articulation (if required) is checked and within deration load chart requirements
- test-lifting load just clear of lifting plane to allow for checks to be safely made in consultation with associated personnel to ensure:
  - slinging is correct
  - all crane equipment is functioning properly
  - load centre of gravity is correct

    - loads of unusual shape or weight distribution are correctly slung
- test-lifting load just clear of lifting plane to allow for checks of crane computer (where fitted) to ensure:
    - load measuring equipment can be used to verify calculated weight of load
    - near capacity loads do not overload crane

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
- crane configuration mathematical calculations to:
    - estimate loads
    - establish counterweight/s requirements (where fitted)
    - radius requirements
    - relevant lifting gear to perform work/task
- characteristics and impact of factors affecting non-slewing mobile crane stability whilst mobiling loads including:
    - side slope derations
    - articulation derations of crane
    - correct tyre pressure (inflation/condition)
    - driving safely on roadways
    - pick up and carry the load
- crane and lifting gear load chart/s and manufacturer requirements
- lift impacting factors including:
    - centre of gravity
    - dynamic nature of load
    - deflection of boom
    - length
    - radius of lift
    - weight
    - side slope derations
    - articulation derations of crane

    - tyre inflation pressures
- hazards including:
    - pack up and crane stability, crane tipping and demolition sites
    - ground stability including ground condition, recently filled trenches and slopes
    - insufficient lighting
    - obstacles or obstruction
    - catching load swing appropriately
    - other specific hazards and dangerous materials
    - overhead hazards including:
        - electric lines
        - service pipes
        - fixed structures
        - Vegetation (Trees)
    - traffic including pedestrians, vehicles and other plant
    - operations on unusual, uneven or difficult terrains
- impact of factors affecting non-slewing mobile crane stability including:
    - overloading
    - pick up and placement of load
    - unbalanced loads
    - articulation of crane
    - correct tyre pressures (inflation/condition)
    - side slope derations
- manufacturer requirements and instructions on shutting down and packing up crane
- mobile non-slewing crane characteristics and capabilities to allow crane configuration to suit a range of loads
- 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 of Work Health and Safety (WHS)/Occupational health and Safety (OHS)/Occupational Safety and Health (OSH) requirements and safe work/workplace procedures
- prestart and operational checks required for a non-slewing mobile crane
- starting procedure of crane as per manufacturer requirements
- set up of:

  - jib
  - fly jib (where fitted)
  - manual boom section (where fitted)
- weather bureau forecasts and environmental conditions that could impact operation
- workplace standards, requirements, policies and procedures for conducting operations for the mobile non-slewing crane
- problems and applying appropriate response procedures to unplanned and/or unsafe situations and environmental conditions
- 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

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within 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 must include access to:

- non-slewing articulated mobile crane with an MRC 12 tonnes or greater in safe/serviceable working order in accordance with manufacturer specifications
- appropriate loads as outlined in the performance evidence requirements
- associated personnel to sling and direct loads including:
  - dogger or rigger
- communications equipment including:
  - two-way radios
  - whistles

- personal protective equipment (PPE)
- relevant documentation for operating a non-slewing mobile crane over 3 tonnes including:
  - approved codes of practice and relevant guidance material
  - relevant Australian technical standards
  - manufacturer guidelines (instructions, requirements or checklists), relevant industry standards and operating procedures (where applicable).

Links

Companion Volume Implementation Guide - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851