Australian Government

TLIE3016 Estimate/calculate load shifting requirements for a mobile crane

Release: 2

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Modification History

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

- Minor changes to unit Application
- Minor changes to Performance Criteria
- Minor update to Performance Evidence
- Minor update to Knowledge Evidence
- Minor changes to Assessment Conditions.

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

Application

This unit involves the skills and knowledge required to estimate/calculate load shifting requirements for a mobile crane.

It includes carrying out required calculations, preparing estimates of loads, estimating and calculating requirements for load shifting, and completing documentation in accordance with relevant state or territory authority licence/permit requirements and regulations for mobile crane operations.

Work is performed with limited or minimum supervision. It involves the application of routine principles, procedures and regulations to estimate/calculate load shifting requirements for a mobile crane.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

E – Communication and Calculation.

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS		PERFORMANCE CRITERIA	
Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	**Identify mathematical information and tools used in the workplace**	1.1	Dimensions and/or weights to be measured are identified from work procedures and, as required, work order forms
		1.2	Units of measurement for allowable safe working load (SWL) and working load limits (WLL) for load shifting are identified from crane load chart
		1.3	Information presented in mathematical symbols, diagrams and pictorial representations is recognised, interpreted and used to complete workplace tasks
		1.4	Appropriate measuring equipment, features and/or scales and units of measurement are selected to completed task and process requirements
2	**Estimate and calculate requirements for load shifting**	2.1	Appropriate methods are selected to perform calculations required to complete workplace tasks, including addition, subtraction, multiplication, division, fractions, decimals, percentages and mixed numbers
		2.2	Quantities of materials and resources required to complete work task are calculated
		2.3	Load balance characteristics are identified
		2.4	Time needed to complete a work activity is estimated
		2.5	Calculations required for weight, reach, radii, boom and jib configurations are undertaken and checked for conformity with crane load chart information
		2.6	Load spread is estimated and/or calculated to ensure safe weighting on pallets, trucks, platforms or other storage or transport systems
		2.7	Measuring instruments are used and read according to manufacturer instructions
3	**Complete documentation using mathematical information**	3.1	Appropriate workplace documentation is completed using recognised symbols and mathematical terms for work tasks
		3.2	Numerical information is self-checked and corrected for accuracy (if appropriate)

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 can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIE3016A Estimate/calculate load shifting requirements for a mobile crane.

Links

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