



Australian Government

Department of Education, Employment and Workplace Relations

UEPOPS230A Operate Lifting and Load Shifting Equipment for Loads greater than ten tonnes

Release: 1

UEPOPS230A Operate Lifting and Load Shifting Equipment for Loads greater than ten tonnes

Modification History

Not Applicable

Unit Descriptor

- **Unit Descriptor**

1)

This unit deals with the skills and knowledge required to undertake the operation of particular cranes and hoists for loads greater than ten tonnes in an environment where electricity is being generated and used to facilitate the installation, modification or maintenance of equipment associated with the Power Generation industry sector.

Application of the Unit

- **Application of the Unit**

3)

This unit is intended to augment formally acquired competencies. It is suitable for employment-based programs under an approved contract of training.

3.1)

License to practise

The skills and knowledge described in this unit may require a licence to practise in the workplace in some States or Territories. There may also be additional assessment activities required by regulatory authorities for the issue of the licence to practise.

Practice in this unit is subject to regulations directly related to Occupational Health and Safety and where applicable contracts of training such as apprenticeships and the like.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

- **Prerequisite Unit(s)** 2)

Competencies 2.1)

Competency in this unit shall be assessed only after the following competencies have been acquired.

UEPOPS201A Comply with Occupational Health and Safety policy and procedures.

Employability Skills Information

Refer to the Evidence Guide

Elements and Performance Criteria Pre-Content

5) Elements describe the essential outcomes of a competency standard unit. Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

- | • ELEMENT | • PERFORMANCE CRITERIA |
|---------------------------------|---|
| 1 Plan and prepare for the work | 1.1 Work requirements are identified from request/work orders or equivalent and clarified/confirmed with appropriate parties or by site inspection |
| | 1.2 Occupational Health and Safety standards, statutory requirements, relevant Australian standards, codes of practice, manufacturers' specifications, environmental requirements and |

• ELEMENT	• PERFORMANCE CRITERIA
	enterprise procedures are identified, applied and monitored throughout the work procedure
	1.3 Resources required to satisfy the work plan are identified, obtained and inspected for compliance with the job specifications
	1.4 Work is planned in detail including sequencing and prioritising and the determination of the appropriate method in accordance with site/enterprise procedures
	1.5 Co-ordination requirements including access and egress are resolved with others involved, affected or required by the work
	1.6 Potential hazards are identified and prevention and/or control measures are selected in accordance with the work plan and site procedures
	1.7 Materials equipment and resources required to satisfy the work plan are identified, obtained and inspected for compliance with the job specifications
	1.8 Where appropriate the teams and individuals roles and responsibilities within the team are identified, and where required, assist in the provision of on-the-job training
2 Operate the equipment	2.1 Pre-operational checks are conducted on equipment and attachments to ensure readiness for operation in accordance with manufacturer's instructions/operating manual
	2.2 Communication and signal methods appropriate to the task are interpreted and applied in accordance with relevant Australian standards and enterprise procedures
	2.3 Equipment is positioned and set up using correct procedures in accordance with job requirements
	2.4 Controls and levers are applied to ensure safe and effective operation of equipment in accordance with manufacturer's instructions

• ELEMENT	• PERFORMANCE CRITERIA
	2.5 Trial lifts are conducted for loads of near capacity or unusual proportions and inspections made to ensure load is correctly slung and lifting equipment is functioning in accordance with manufacturer's specifications
	2.6 Speed and operation of equipment is in accordance with manufacturer's specifications and job/statutory requirements
	2.7 Equipment operations are conducted in accordance with the work plan whilst paying due regard to the security of the surrounds
	2.8 Appropriate shifting device(s) selected
	2.9 Load is hoisted, manoeuvred and lowered into position using all relevant equipment movements in accordance with relevant Australian standards
3 Conduct operator maintenance	3.1 Inspection and fault finding are conducted in accordance with manufacturer's specifications or enterprise requirements
	3.2 Operational servicing and minor maintenance is carried out to manufacturer's specifications or enterprise requirements
4 Complete the work	4.1 Work is completed and appropriate personnel notified in accordance with site/enterprise requirements.
	4.2 Plant, tools and equipment are maintained and stored in accordance with site/enterprise procedures.
	4.3 Work completion details are finalised in accordance with site/enterprise procedures.

Required Skills and Knowledge

• REQUIRED SKILLS AND KNOWLEDGE

6) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of operating lifting and load shifting equipment for loads greater than ten tonnes.

The extent of the Essential Knowledge and Associated Skills required follows:

Evidence shall show that knowledge has been acquired for safe working practices of:

- Occupational Health and Safety standards
- Relevant statutory requirements and codes of practice
- Relevant Australian standards
- Communication principles and signal methods
- Equipment operation, limitations and procedures
- Equipment attachments
- Slings, ropes and chains
- Operator maintenance
- Hazard control
- Introduction to power production plant
- Typical arrangements of power production plant
- Mechanics
- Mathematics
- Safe operating principles

Specific skills needed to achieve the Performance Criteria:

- Apply Occupational Health and Safety standards
- Apply relevant statutory requirements and codes of practice
- Apply relevant Australian standards
- Interpret and apply communication and signal methods
- Manoeuvre and position load shifting equipment

- **REQUIRED SKILLS AND KNOWLEDGE**

- Lift and transfer loads within equipment capacity
- Operate equipment and attachments
- Identify, control or eliminate hazards
- Apply hand-eye co-ordination
- Use hand tools
- Maintain equipment records
- Conduct operator maintenance
- Communicate effectively
- Apply data analysis techniques and tools.

Evidence Guide

- **EVIDENCE GUIDE**

8) This provides essential advice for assessment of the competency standard unit and must be read in conjunction with the Performance Criteria and the Range Statement of the competency standard unit and the Training Package Assessment Guidelines. The Evidence Guide forms an integral part of this competency standard unit and shall be used in conjunction with all components parts of this unit and, performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment

8.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the Industry's preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accord with Industry and, Regulatory policy in this regard.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical

- **EVIDENCE GUIDE**

equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Hence, sources of evidence need to be 'rich' in nature so as to minimise error in judgment.

Activities associated with normal every day work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practised. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

Critical aspects of evidence required to demonstrate competency in this unit

8.2)

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each Element and associated Performance Criteria shall be demonstrated on at least two occasions in accordance with the "Assessment Guidelines - UEP06". Evidence shall also comprise:

- A representative body of Performance Criteria demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:

• EVIDENCE GUIDE

- Implement Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the Performance Criteria and Range Statement
- Apply sustainable energy principles and practices as specified in the Performance Criteria and Range Statement
- Demonstrate an understanding of the Essential Knowledge and Associated Skills as described in 6) Essential Knowledge and Associated Skills of this unit
- Demonstrate an appropriate level of skills enabling employment
- Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures
- Demonstrated performance across a representative range of contexts from the prescribed items below:
 - Knowledge and application of relevant sections of: Occupational, health and safety legislation; Statutory legislation; Enterprise/site safety procedures; Enterprise/site emergency procedures
 - Manoeuvring and positioning load shifting equipment
 - Safely slinging loads, Conducting operator maintenance
 - Lifting and transferring loads within equipment capacity
 - Dealing with an unplanned event by drawing on Essential Knowledge and Skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items.

Context of and specific resources for assessment

8.3)

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this competency standard unit.

Competency Standards should be assessed in the workplace or simulated workplace and under the normal range of workplace conditions.

• EVIDENCE GUIDE

Assessment of this unit will be supported with documentary evidence, by means of endorsement stating type and application of work.

In addition to the resources listed above in Context of assessment', evidence should show competency working in limited spaces, with different structural/construction types and method and in a variety of environments.

Method of assessment

8.4)

This unit shall be assessed by methods given in Volume 1, Part 3 Assessment Guidelines.

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this competency standard unit applies. This requires that the specified Essential Knowledge and Associated Skills are assessed in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the Essential Knowledge and Skills described in this unit.

Concurrent assessment and relationship with other units

8.5)

For optimisation of training and assessment effort, competence in this unit may be assessed concurrently with the unit(s) as stated in Section 3.1 as well as the following units:

UEPOPS229A Operate lifting and load shifting equipment for loads less than ten tonnes.

Key competencies

8.6)

Evidence that particular key competencies have been achieved within this competency standard unit is in the context of the following Performance Criteria of evidence. See Volume 2, Part 4 for an explanation of Key competencies and levels of this Training Package.

Key competencies	Example of Application	Performance Level
How are ideas and information communicated within this competency?	Refer to the following example of application: Sharing information orally or in writing in simple English to confirm work requirements. Discussion may take place with supervisors or	1

Concurrent

8.5)

	others in the work group.	
How can information be collected, analysed and organised?	Refer to the following example of application: Accessing information required for operating the plant / equipment, including operating procedures and work instructions.	1
How are activities planned and organised?	Refer to the following example of application: Planning the required activity, to include co-ordination and use of equipment, materials and tools to avoid backtracking and rework.	1
How is team work used within this competency?	Refer to the following example of application: Teamwork may be applied in communicating the methods and procedures for the operation of the plant and equipment.	1
How are mathematical ideas and techniques used?	Refer to the following example of application: Calculation of time to complete tasks, estimation of distances, levels, loads and material requirements.	1
How are problem solving skills applied?	Refer to the following example of application: Follow established operational procedures.	1
How is use of technology applied?	Refer to the following example of application: Access, communicate, measure and record information with regard to operations and performance of plant and equipment.	1

**Concurrent
assessment and**

8.5)

**Skills Enabling
Employment**

8.7)

Evidence that competency in this unit incorporates skills enabling employment is in the context of the following performance. See Volume 2, Part 5 for definitions and an explanation of skills enabling employment.

Skills for Employment		Example of Application
1	Developing and using skills within a real workplace	Refer to the following example of application: Completion of tasks within an acceptable timeframe and performance under supervision.
2	Learning to learn in the workplace	Refer to the following example of application: Recalling of knowledge and development of practical skills.
3	Reflecting on the outcome and process of work task	Refer to the following example of application: Recognition that performance of a work task meets the accepted standard.
4	Interacting and understanding of the context of the work task	Refer to the following example of application: Completion of work tasks to meet the team's goals.
5	Planning and organising the meaningful work task	Refer to the following example of application: Achievement of work tasks in a timely manner which contributes to the team's objectives.
6	Performing the work task in non-routine or contingent situations	Refer to the following example of application: Complete the assigned work task to meet timelines and to seek supervisor assistance as required.

Range Statement

• RANGE STATEMENT

7) This relates to the competency standard unit as a whole providing the range of contexts and conditions to which the Performance Criteria apply. It allows for different work environments and situations that will affect performance.

Particular cranes and hoists may include tower cranes; derrick cranes; portal boom cranes; bridge and gantry cranes; vehicle loading cranes (10 metre tonnes capacity and above); non-slewing mobile cranes (greater than 3 tonnes capacity); slewing mobile cranes (up to 20 tonnes) (up to 60 tonnes) (up to 100 tonnes) (open/over 100 tonnes); materials hoists (cantilever platforms); and hoists (personnel and materials).

Pre-operational checks may include testing emergency controls, safety devices, lighting, alarm systems and communication equipment.

Operation of equipment may be conducted in all weather conditions and by day and night.

Potential hazards may include surrounding buildings, barricades, inadequate lighting uneven or unstable ground, other personnel, vessels, structures and radio interference.

Attachments may include shackles, spreader beams, chains, slings, plate, dogs, grabs, gin pole and fly jib.

Instructions may include operators manual and information charts on equipment limitations (i.e. radii, jib angle, boom extension and load capacities).

Operator maintenance may include lubrication and housekeeping tasks.

Work completion details may include equipment maintenance records, job cards, check sheets and reporting and/or documenting equipment defects.

Generic terms are used throughout this Training Package for vocational standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms are given in Volume 2, Part 1.

Unit Sector(s)

Not Applicable

Literacy and numeracy skills

Literacy and numeracy skills

2.2)

Participants are best equipped to achieve this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 Literacy and Numeracy

Reading 2 Writing 2 Numeracy 2

Competency Field

Competency Field

4)

Operations.