

Operate boom type elevating work platforms

Code OHSCER235A

Workplace Health and Safety Queensland is moving to a new learning and assessment system for certificates to work in prescribed occupations. Learning and assessment will now be conducted in the Vocational Education and Training (VET) sector in which units of competency set out the knowledge and skills needed to demonstrate competent performance in a prescribed occupation.

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CODE: OHSCER235A

TITLE: Operate boom type elevating work platforms (boom length 11 metres or more)

DESCRIPTOR: This unit of competency covers the functions required to operate boom type elevating work platforms (boom length 11 metres or more) to meet minimum training and assessment standards for the purposes of certification. This unit has been developed in accordance with the licensing and assessment requirements of NOHSC:1006 [2001].

This unit involves assessing and securing equipment and work area, securing and transferring load of boom type elevating work platforms (boom length 11 metres or more).

Element	Performance Criteria
1.0 Assess and secure equipment and work area	
1.1 Conduct routine checks	1.1.1 Routine pre-operational equipment <i>checks</i> are carried out in accordance with the checklist provided for the elevating work platform. 1.1.2 The service log book for the elevating work platform is checked to ensure all service requirements have been met and action taken as required. 1.1.3 Prior to operation, <i>equipment</i> and <i>site</i> area are visually checked for any evidence of damage, structural weakness or interference, and any faults reported to an authorised person for corrective action.
1.2 Plan Work	1.2.1 A <i>workplace</i> operations plan is developed in consultation with the relevant authorised workplace personnel. The plan takes into account job requirements, priorities, workplace rules and procedures, identified hazards and hazard control measures. 1.2.2 <i>Site</i> hazards are identified and correct hazard control strategies developed in accordance with the appropriate Australian Standard AS2550. 1.2.3 Plans for emergency <i>procedures</i> take into account the location of first aid and fire fighting equipment, amenities and access/egress points in the workplace. 1.2.4 Precautions are taken to accommodate the effects of weather conditions in accordance with the appropriate Australian Standard. This includes, where necessary, deciding to postpone operations where weather conditions exceed acceptable limits. 1.2.5 The operations plan ensures that the <i>work area</i> is correctly illuminated. 1.2.6 The load chart for the elevated work platform is located and information on permissible loads, radii and heights noted and taken into account in operational plans.

Element	Performance Criteria
1.3 Check controls	<p>1.3.1 The elevating work platform is started in accordance with equipment <i>procedures</i> and checks made for any abnormal noise or movement. Any abnormal operation is reported to an authorised person for corrective action.</p> <p>1.3.2 The operating and emergency controls and safety devices are located and identified and their correct operation tested in accordance with prescribed procedures.</p> <p>1.3.3 Defective controls and safety devices are reported to authorised <i>personnel</i> for corrective action and the defects entered into the service log book.</p> <p>1.3.4 All <i>equipment</i> is checked. Defective equipment is identified and segregated and reported to an authorised person for disposal, repair and/or replacement.</p>
1.4 Shut down elevating work platform	<p>1.4.1 The elevating work platform is <i>shut down</i> using the correct sequence of procedures in accordance with manufacturer's instructions.</p> <p>1.4.2 Routine post-operational equipment <i>checks</i> are carried out in accordance with the checklist provided for the elevating work platform.</p> <p>1.4.3 The elevating work platform is correctly stowed and secured in accordance with manufacturer's instructions and the appropriate Australian Standard.</p>
2.0 Operate elevating work platform	
2.1 Plan elevation	<p>2.1.1 Work gear and tools are properly stowed in the elevating work platform.</p> <p>2.1.2 Emergency descent <i>procedures</i> are practised in accordance with statutory requirements.</p> <p>2.1.3 The weight of the load (personnel and equipment) is correctly estimated and taken into account in operational plans.</p> <p>2.1.4 Elevation <i>procedures</i> are planned in consultation with other relevant personnel including appropriate hazard control strategies.</p>

Element	Performance Criteria
2.2 Carry out elevation	<p>2.2.1 The planned <i>procedures</i> for operating the elevating work platform are carried out in accordance with workplace/manufacturer's procedures.</p> <p>2.2.2 Planned <i>hazard</i> control strategies are implemented.</p> <p>2.2.3 Emergency procedures are carried out to deal with emergency situations.</p>
3.0 Set up and dismantle elevating work platform	
3.1 Set up elevating work platform	<p>3.1.1 A suitable firm and level standing is chosen and prepared for the location of the elevating work platform.</p> <p>3.1.2 Outriggers and stabilisers are deployed and blocked up as required in accordance with manufacturer's instructions.</p> <p>3.1.3 Planned <i>hazard</i> control strategies are implemented.</p>
3.2 Dismantle elevating work platform	<p>3.2.1 The planned procedures for the dismantling of the elevating work platform carried out in accordance with manufacturer's instructions, and relevant parts of relevant statutory regulations.</p> <p>3.2.2 The outriggers and stabilisers are secured and stowed in accordance with manufacturer's instructions.</p>

Range Statement

The range of variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The assessment must determine that there is sufficient skill and knowledge for the operator to take the licence and operate in a new workplace. The assessment must be adjustable but prescriptive to ensure transferability.

What may be involved in routine *checks* of a elevating work platform (boom length 11 metres or more)?

Plan and prepare

Planning and preparation is to include but not be limited to:

- worksite inspection
- equipment defect identification
- assessment of conditioning
- hazards
- determination of work requirements.

The boom type elevating work platform is subject to erection and commissioning documentation prior to operation.

Operations may include but not be limited to:

- telescope in and out
- slew left and right
- operate outriggers
- boom up and down
- operation of attachments
- motion and four wheel drive.

Pre-start

- Pre start checks must follow manufacturer's recommendations, Australian Standards and guidelines.
- Inspect elevating work platform and lifting gear for defects
- Ensure written documents are completed.
- Establish exclusion zones with barricades if necessary.
- Ensure relevant permits, authority to work are obtained.

Post-start

- Follow manufacturers' specifications and operating equipment.
- Checks may include but not limited to hazards warning systems, for example lights and horns are functional.
- Attachments, movement and control functions are smooth and comply with operating requirements.
- The operating, emergency controls and safety devices are located and identified and correctly tested in accordance with manufacturers' specifications.
- Communication signals to be confirmed with appropriate personnel.
- Defects and damage are reported according to site procedures.
- Outrigger pads are checked.

What range of boom type elevating work platforms (boom length 11 metres or more) may be operated?

The range of elevating work platforms include but not limited to:

- boom lifts
- knuckle booms
- truck mounted platforms.

Elevating work platforms may include but not limited to electrical, hydraulic and mechanical.

Workplace requirements may include but are not limited to:

- standard operating procedures
- industry standards
- production schedules
- material safety data sheets
- work notes and plans
- product labels
- manufacturers specifications
- enterprise policies and procedures (Including waste disposal, recycling guidelines)
- supervisors oral and written instructions
- current state/territory occupational health and safety legislation
- Australian standards
- codes of practice or advisory standards.

What *hazards* may be encountered in the workplace?

Hazards may include but not limited to:

- exposure to chemicals
- dangerous or hazardous substances
- explosive materials
- movements of equipment
- goods
- materials
- vehicular traffic.

Operating moving may include but not be limited to:

- overhead power lines
- trees
- overhead service lines such as steam, gas, water, telephone
- underground services
- uneven and/or unstable ground
- allowable floor loading as appropriate
- other workers and persons
- surrounding buildings
- vessels/structures equipment
- hazardous materials
- corrosive substances
- barricades
- explosive materials
- inadequate lighting
- radio interference
- inclement weather.

What *site*/occupational health and safety requirements may be relevant to this standard?

Site/occupational health and safety requirements are to include but not be limited to:

- safe systems and procedures for ensuring loads are secure and within working specifications
- identification and avoidance of obstacles during load-shifting operation
- hazard and risk control
- operator position to maintain unobstructed view
- handling including lifting and carrying
- manual handling
- the application of emergency/defensive action and techniques for controlling loads
- application and storage of hazardous substances
- outdoor work including protection from solar radiation
- noise
- dust
- rubbish
- protection of people in the workplace
- appropriate use and maintenance of personal protective equipment
- calculating loads
- using lifting equipment and associated gear to manufacturers specifications
- extreme environment temperatures (hot/cold)
- use of high visibility clothing/reflective vests
- traffic management
- barricades.

Safe operating *procedures* are to include but not be limited to:

- conduct of operational risk assessment and treatments associated with power cables (including overhead service trays, cables and conduits)
- lighting
- trip hazards
- working with dangerous materials
- working in confined spaces
- surrounding structures
- restricted access barriers
- working at heights.

Emergency procedures related to equipment operation are to include but may not be limited to:

- emergency shutdown and stopping
- extinguishing equipment fires
- organisational first aid requirements
- evacuations.

What permits may be relevant to this standard?

Any permits required to carry out job activity are obtained from the relevant authorized personnel, for example confined spaces, chemical or dangerous goods storage, explosives, road and/or rail.

What *work area* may be relevant to this standard?

Work areas may include but not be limited to:

- factories
- wharfs
- ships
- warehouses
- manufacturing plants
- building sites
- road construction
- demolition sites
- quarries
- mine sites

What personal protective *equipment* may be relevant to this standard?

This may include but not be limited to:

- boots
- hat/hard hat
- overalls
- gloves
- protective eyewear
- hearing protection
- respirator or face mask
- sun protection
- task specific personal protective equipment

What needs to be considered for personal/public safety?

Site/non site personnel are safeguarded (protected) by a variety of measures including:

- the erection of barricades
- posting of signs
- traffic control consistent with principles of the hierarchy of control.
- appropriate equipment is selected to ensure personnel safety and protection.

Who are site/non site *personnel*?

Non site *personnel* may include but not limited to:

- members of the public
- visitors to the site
- delivery driver.

Site *personnel* may include but not limited to:

- employees
- contractors
- management or students.

How might the operation of a boom type elevating work platform (boom length 11 metres or more) be demonstrated in a safe, controlled and correct manner?

Appropriate selection and use of:

- controls
- features
- settings and operational techniques for the specific settings, specific terrain and weather conditions in the day or night on varying infield terrain without causing damage to machinery, equipment, load, person, property or environment (including soils and property structures).

Correct operation includes using appropriate methods to load-shifting enterprise standards so that corrective actions including defensive techniques are implemented.

What procedures may be included in the shut down of a boom type elevating work platform (boom length 11 metres or more) and securing of site?

The crane is shut down in accordance with manufacturers' instructions including:

- outriggers are retracted and locked
- boom is correctly secured in accordance with manufacture's requirements
- inspect, stow and secure all relevant equipment – attachments
- defective equipment is identified and segregated and reported to supervisor and logged and tagged
- lock equipment and remove key.

What records may need to be kept or updated?

- log books
- maintenance records
- records of faults and potential faults
- repairs carried out according to manufacturers specifications and operating procedures.

Evidence Guide

What evidence is required to demonstrate competence for this standard as a whole?

The evidence guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the performance criteria, the range statement and the assessment guidelines.

Competence in this standard requires evidence of the ability to operate a boom type elevating work platforms (boom length 11 metres or more) without damage or injury to property or people. It requires the ability to plan job, select and inspect material and tools and move loads.

What **critical aspects** of evidence are required to demonstrate competency in this unit?

- Location, interpretation and application of relevant information, standards and specifications.
- Compliance with the site safety plan and occupational health and safety legislation/regulations/codes of practice/advisory standards applicable to workplace operations.
- Compliance with organisational policies and procedures including quality requirements.
- Safe and effective operational use of tools, plant and equipment.
- Communication and working effectively and safely with others.
- Completion of set up and operation of elevated work platforms including all functions to the maximum extensions.

What **specific knowledge** is needed to achieve the performance criteria?

- Operating principles and operating methods
- Legislative requirements with regard to licensing.
- General construction terminology
- Elevated work platform processes and procedures.
- Principles of the safe removal of obstacles and hazards from the workplace.
- The hierarchy of hazard control measures with elimination of substitution, isolation and engineering control measures being selected before safe work practices and personal protective equipment.
- Workplace communication procedures.
- Demonstrate safe and environmentally responsible workplace practices.
- Understanding limitations of equipment
- Specifications of equipments and how they relate to loads
- Designs and functions of elevating work platform
- Safe working load tags.
- Obtain licenses and permits.
- Demonstrate safe and environmentally responsible workplace practices.

What **specific skills** are needed to achieve the performance criteria?

- Readily familiarise self with local conditions.
- Demonstrate emergency operating procedures.
- Read and interpret site planning, manufacturers' specifications, work and maintenance plans and material safety data sheets.
- Comprehend and apply task instructions.
- Working with other plant operators.
- Ability to work at heights and falls arrest
- Emergency situations
- Able to listen and understand job requirement.
- Understand written documents for job processes.
- Understand tables and figures for job procedures.
- Understand interrelationship among workplace processes and procedures in the English language.
- Understand and interpret signals and instructions in the English language.
- Hand/eye co-ordination.
- Identify and eliminate defective equipment and/or gear.

What **methods of** assessment should apply?

- Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.
- Assessment must include as a minimum the achievement of competence to the standard established in the NOHSC assessment instrument. Additional requirements may need to be achieved to comply with the AQTF including key competencies.
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge.
- Assessment must be applied in a real work environment or replicated industrial workplace.

In what **context** should the assessment occur?

- The application of competency is to be assessed in the workplace or replicated industrial workplace.
- Assessment is to occur using standard and authorised work practices including safety equipment and environmental constraints.
- Assessment of essential underpinning knowledge, other than the confirmatory questions, will usually be conducted in an off-site context.
- Assessment is to comply with relevant regulatory requirements including specific Australian Standards.

What are the **specific resource requirements** for this unit?

- Workplace location or replicated work facility in accordance with the OHS instrument relating to the OHS jurisdiction.
- Tools and equipment appropriate to elevating work platforms.
- Specifications and work instructions
- Appropriate boom type elevating working platform
- Communication equipment (radios) (where applicable)
- Occupational Health and Safety Certification Training and Assessment Delivery Guide
- Occupational health and safety assessment instruments
- Occupational health and safety authority learner guide
- Occupational health and safety authority trainer guide.

What key competencies should be applied to this unit of competency?

There are a number of processes that are learnt throughout work and life which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these covered by the key competencies, although other may be added. The questions below highlight how these processes are applied in this competency standard. Following each question is the number in brackets indicates the level to which the key competency needs to be demonstrated where:

0 = not required

1 = perform the process

2 = perform and administer the process

3 = performance, administer and design the process

1. How can communication of ideas and information be applied)	Communicate ideas and information orally and in writing in simple English to enable confirmation of work requirements, passage of information and requests to other workers during operations and the reporting and recording of work outcomes. <p style="text-align: right;">Level 1</p>
2. How can information be collected, analysed and organised?	Collect, organize, interpret and understand the information required for operating a crane including work instructions, plans, sketches, diagrams, safety instructions, labels, quality procedures, manufacturers instructions, material safety data sheets and equipment instructions <p style="text-align: right;">Level 1</p>
3. How can activities be planned and organised?	Conduct activities associated with operating a boom type elevating work platform including the coordination and use of equipment, materials and tools to avoid back tracking and rework. <p style="text-align: right;">Level 1</p>
4. How can team work be applied?	Work with others and in a team by recognizing dependencies and using co-operative approaches to optimize satisfaction and productivity. <p style="text-align: right;">Level 1</p>
5. How can the use of mathematical ideas and techniques be applied?	Use mathematical ideas and techniques to correctly calculate time to complete tasks, estimate measurements, distances and levels, calculate material requirements and establish quality checks. <p style="text-align: right;">Level 1</p>
6. How can problem solving skills be applied?	Establish safe and effective work processes which anticipate likely problems and blockages and systematically work around those to avoid or minimize reworking and avoid wastage. <p style="text-align: right;">Level 1</p>
7. How can the use of technology be applied	Use workplace technology related to operating a crane including the use of calculators, the use of communication devices and the reporting and/or recording of results. <p style="text-align: right;">Level 1</p>

Are there any other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with the other units of competency relevant to the job function.

It is strongly recommended people wishing to undertake this unit possesses dogging competencies and relevant current industry experience. This may be demonstrated through a log book or record of training.

There is essential information about assessing this competency standard for the consistent performance and where and how it may be assessed in the Assessment Guideline developed by the National Occupational Health and Safety Commission. All users of this competency standard must have access to this guideline.