



Australian Government

Department of Education, Employment and Workplace Relations

BCCCM2002C Use small plant and equipment

Release: 1

Modification History

Not Available

INTRODUCTION TO USE SMALL PLANT AND EQUIPMENT

Unit Descriptor This unit specifies the competency required to use a range of small plant and equipment commonly employed in civil construction activities and sites. It includes the minimum criteria for competency assessment.

The unit covers the selection of the most appropriate equipment, the planning and preparation for work, the conduct of checks, the use of the plant or equipment and the post operational maintenance and clean up.

Employability Skills The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

Element

Performance Criteria

Elements define the essential outcomes of a unit of competency

Performance criteria specify the level of performance required to demonstrate achievement of the element.

1 Plan and prepare

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job
- 1.4 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

2 Conduct pre-operational checks

- 2.1 Fuel and lubricants are selected according to manufacturers' specifications
- 2.2 Fuel, oil, hydraulic fluid and water levels are checked and adjusted according to manufacturers' manual
- 2.3 Bolts, nuts, guards and attachment couplings are secured/tightened and maintained in accordance with manufacturers' instructions

- 2.4 Function of controls and gauges are checked and adjusted where necessary to comply with manufacturers' manual
 - 2.5 Standard start-up and shut down procedures are conducted according to requirements of operators' manual
- 3 Use small plant and equipment
 - 3.1 Site hazards associated with small plant and equipment operations are identified and appropriate controls established in accordance with the requirements of the site safety plan
 - 3.2 Operating techniques for small plant and equipment are identified and applied to achieve optimum output in accordance with manufactures' design specifications while maintaining specified tolerances
 - 3.3 Machine is operated to produce results within design specifications to meet specified tolerances
 - 3.4 Plant and equipment are safely located when not in immediate use
 - 3.5 Responsibility of self direction to achieve finished product to job/design specifications is assumed
- 4 Carry out operator maintenance
 - 4.1 Plant/equipment is shut down and prepared for maintenance as per manufacturers' manual and organisational requirements
 - 4.2 Inspection and fault finding are conducted in accordance with manufactures' specifications and/or organisational requirements
 - 4.3 Defective parts are removed and replaced safely and effectively according to manufacturers' manual and organisational requirements
 - 4.4 Regular programmed maintenances tasks are carried out in accordance with manufacturers' and/or organisational requirements
- 5 Clean Up
 - 5.1 Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan
 - 5.2 Plant, equipment and tools are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

Unit scope	Small plant and equipment are classed in the following categories: Pneumatic powered (jackhammers, trench rammers or wacker tamping rammers) Electrically powered (alternators/generators, battery chargers, compressors, circular saws, concrete mixers, hammer drills or lighting sets) Petrol or diesel driven (brush cutters, compressors, concrete mixers, emulsion screed boards, masonry concrete saws, post hole diggers, telescopic tree pruners, vibrator concrete pencil or water pumps) Other (solar powered sign boards, small pedestrian manually operated rollers) Power sources may include 240 volt electricity, compressed air and petrol/diesel motors and hydraulics Operator maintenance is to include cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements
Safety (OH&S)	OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials

	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 and evacuation
Environmental Requirements	Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
Quality Requirements	Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
Statutory/Regulatory Authorities	State/Regulatory Authorities may include Federal, State and Local Authorities
Materials	Materials associated with the use of small plant and equipment may include but are not limited to water, clays, silts, stone, gravel, mud, rock, sand, topsoil, bituminous mixes, timber, fuels and oils, power leads, replacement parts and consumables
Communications	Communications are to include but not be limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task On site meeting processes may include notification/ scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues
Information	Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, material safety data sheets (MSDS) and diagrams or sketches Safe work procedures related to the operation of small plant and equipment on construction sites Regulatory/legislative requirements pertaining to small plant and equipment operations and the environment

Manufacturers' specifications and instructions

Organisation work specifications and requirements. Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

EVIDENCE GUIDE

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 of the Training Package.

Critical aspects of evidence required to demonstrate competency in this unit

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

The completion of realistic site based tasks using at least one small plant item from two different categories listed in the unit scope.

The application of emergency procedures

The conduct of authorised operator maintenance

Communication and working effectively and safely with others

Relationship to other units

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

Specific knowledge required to achieve the performance criteria

A knowledge of

- -Small plant and equipment types, characteristics, technical capabilities and limitations
- Basic soil types and characteristics
- Site and equipment safety requirements
- Small plant and equipment operating techniques related to essential tasks
- Processes for interpreting engineering drawings and sketches
- Operational, maintenance and basic diagnostic procedures
- Site isolation and traffic control responsibilities

and authorities

- Materials Safety Data Sheets and materials handling methods
- Project quality requirements
- Civil construction terminology
- Processes for compaction of concrete, soils and granular materials
- JSA's/Safe work method statement

The context of assessment

The application of competency is to be assessed in the workplace or realistically simulated construction site

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off- site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

Methods of assessment

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

Specific resource requirements for this unit

The following resources should be made available:

- Workplace location or simulated workplace
- operational small plant and equipment with appropriate support materials
- realistic tasks covering the mandatory task requirements
- maintenance materials appropriate to the small plant and equipment
- specifications and work instructions