



Australian Government

CPCCE3020A Select and use tools and equipment for hot work in the demolition industry

Release 1

CPCCDE3020A Select and use tools and equipment for hot work in the demolition industry

Modification History

New unit.

This version first released with CPC08 Construction, Plumbing and Services Training Package Version 9.

Unit Descriptor

This unit of competency specifies the outcomes required to cut materials using cutting processes that create a heat source that could cause an ignition. The unit covers the safe operation and maintenance of tools and equipment for hazardous demolition hot work.

Application of the Unit

This unit of competency supports demolition workers who perform demolition tasks, such as cutting concrete, steel and timber.

Licensing/Regulatory Information

Hot work permits and licences for the operation of specialised hot-work equipment are required in different States and Territories.

In addition, licensing, legislative, regulatory or certification requirements apply to demolition work in different States and Territories. Candidates are advised to consult with the relevant regulatory authorities.

Pre-Requisites

CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry
--------------	--

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | | |
|---|---|-----|---|
| 1 | Plan and prepare. | 1.1 | Work instructions are obtained using relevant <i>information</i> , confirmed with colleagues or supervisor, and applied to planning and preparation. |
| | | 1.2 | <i>Site work health and safety (WHS) requirements</i> are identified and applied to task planning according to safety plans and policies and work site requirements. |
| | | 1.3 | Work site inspection is conducted and <i>hazards associated with individual demolition hot work tasks</i> are assessed immediately prior to commencing work according to workplace procedures. |
| | | 1.4 | <i>Environmental requirements</i> are identified and applied according to environmental plans and regulatory obligations. |
| | | 1.5 | Permits for hot work and licences for specialised equipment are obtained or checked before starting work. |
| 2 | Select tools and equipment and prepare for use. | 2.1 | <i>Tools and equipment</i> are selected for different <i>hot work tasks</i> according to manufacturer recommendations and workplace requirements. |
| | | 2.2 | Pre-operational checks and maintenance requirements are completed according to manufacturer recommendations, and faults are rectified and reported. |
| | | 2.3 | Safe methods of operation of tools and equipment for hot work are identified from manufacturer instructions and workplace requirements. |

- 2.4 Specific WHS requirements for the selected tools and equipment for hot work are identified and applied.
- 3 Complete cutting, grinding and hot work.
 - 3.1 Confirmation is obtained from supervisor and regulatory authorities that existing services have been disconnected.
 - 3.2 Safe demolition work method statement is amended if required and confirmed with colleagues or supervisor.
 - 3.3 **Work area is prepared** for hot work according to site safety and workplace requirements.
 - 3.4 Tools and equipment are used for their intended purpose in hot work demolition tasks according to regulations, standards, codes of practice and workplace requirements.
 - 3.5 Work progress and hazards or issues arising during work tasks are **communicated with work team** according to workplace requirements.
 - 3.6 Tools and equipment are placed in safe locations when not in immediate use.
- 4 Clean up.
 - 4.1 Work area is cleared and materials are sorted for reuse or recycling, and removed or waste disposed of, using safe manual handling techniques and according to legislation, regulations, codes of practice and job specification.
 - 4.2 Tools and equipment are cleaned, checked, maintained and stored according to manufacturer recommendations and standard work practices.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- learning skills to:
 - recognise signs indicating undiscovered hazards on a demolition site, for example presence of residual fuel
 - respond to change, such as differences in current work site environmental and sustainability requirements
- numeracy skills to:
 - check levels of lubricants in tools
 - perform measurements and calculations associated with work, such as when determining specified length of wall to be removed
- oral communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, and share information
 - report hazards on the work site, including faults in tools and equipment or materials
 - use language and concepts appropriate to cultural differences
- reading skills to:
 - interpret documentation, including drawings and specifications
 - understand written instructions, procedures and signage
- writing skills to complete pre-operational checklists and simple equipment fault forms

Required knowledge

- general construction terminology
- hazards that may exist or arise on demolition sites, especially those associated with hot work, such as:
 - build-up of combustible materials
 - chemical compounds
 - drums
 - dust
 - gas
 - residual fuels, for example in pipework to be cut
 - sparks
 - storage tanks
- procedures for:

- environmentally sound waste management
- managing risks and hazards on demolition sites
- sorting and storing reusable and recyclable materials
- types of information required to plan and prepare for safe and effective completion of demolition tasks
- types of tools and equipment used for cutting, grinding and hot work in the demolition industry, including:
 - applications of each type of tool or piece of equipment
 - maintenance requirements
 - safe methods of operation for different cutting, grinding or hot work tasks

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment This unit of competency could be assessed in the workplace by observation of the selection and use of hot work tools and equipment, and completion of on-site demolition tasks as part of a team.

Critical aspects for assessment and evidence required to demonstrate competency in this unit A person should demonstrate the ability to:

- set up and use cutting equipment, such as oxy-fuel gas cutting equipment, to cut through a metal structural element
- set and use a demolition saw to cut through a structural element
- use an LEL unit to identify lower explosive level at two sites
- locate, interpret and apply relevant information, standards and specifications relating to hot work
- comply with site safety plan and requirements of WHS legislation, regulations and codes of practice applicable to workplace operations
- comply with organisational policies and procedures, including quality requirements
- communicate and work effectively and safely with others
- follow work instructions, operating procedures and inspection practices to safely and effectively use demolition hot work tools and equipment for their appropriate application, ensuring:
 - there is no damage to tools and equipment
 - work is completed to specification
 - compliance with regulations, standards and organisational quality procedures and processes.

Context of and specific resources for assessment Assessment of this unit:

- must be in the context of the work environment
- must meet relevant compliance requirements.

Resource implications for assessment include:

- an induction procedure
- realistic tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment as listed appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and

addressing hazards and emergencies

- information relevant to each task, such as safety data sheets.

Method of assessment

Assessment for this unit must verify the practical application of the required skills and knowledge, using a combination of the following methods:

- direct observation of tasks in real work conditions
- questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- review of relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Guidance information for assessment

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

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Assessment processes and techniques should, as far as is practical, take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Information may include:

- advice and guidelines relating to regulatory and legislative requirements for using demolition tools and equipment
- current Australian standards relating to hot work in the demolition industry
- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- job safety analyses (JSA)
- manufacturer specifications and instructions, where specified including advice for the:
 - safe handling of cylinders

Work health and safety requirements must comply with state or territory legislation and regulations and demolition project safety plan and may include:

- safe maintenance of equipment
- safe use of oxy/fuel gas cutting equipment
- memos
- plans, drawings and specifications
- and procedures relating to the use of demolition hot work tools and equipment
- quality requirements
- safe work method statements (SWMS)
- safety data sheets (SDS)
- signage
- verbal, written and graphical instructions
- work bulletins
- work schedules, plans and specifications.
- emergency procedures, including extinguishing fires, organisational first aid requirements, and evacuation procedures
- fire watch during hot work procedures, including post-activity fire watch
- handling of pressurised cylinders
- hazard identification and control, for such things as presence of residual fuels, and selection of alternative methods to hot work
- hot work permits
- manual handling activities that may require the assistance of others or the use of manual or mechanical lifting devices where size, weight or other issues, such as a disability are a factor
- personal protective equipment (PPE) prescribed under legislation, regulations and workplace policies and practices
- selection and use of monitoring equipment, such as lower explosive level (LEL) meter
- use of safe operating procedures, including operational risk assessment and treatments associated with:
 - cutting, grinding and hot work
 - equipment tagging
 - fall protection
 - identification and preparation of access and egress points
 - identification of equipment guarding and cut-off switches
 - lighting
 - power cables, including overhead service trays, cables and conduits
 - restricted access barriers
 - surrounding structures

- traffic control
- trip hazards
- work site visitors and the public
- working at heights
- working in confined spaces
- working in proximity to others.

Hazards associated with individual demolition hot work tasks may include:

- hazards identified in project demolition plan
- unpredicted hazards uncovered as a result of prior work completed on site, such as:
 - chemical waste
 - lead coating
 - underground fuel tanks.

Environmental requirements may include:

- management of:
 - clean-up
 - dust
 - energy use
 - noise
 - vibration
 - waste
 - water use
- sedimentation control
- stormwater quality.

Tools and equipment must include:

- arc gouging equipment
- angle grinders
- demolition saws:
 - concrete
 - steel
- chain saws, including diamond chainsaws
- gas cutting equipment
- grinding discs
- oxy-fuel gas cutting equipment
- plasma cutting equipment
- quick cut saws
- thermal lancing equipment
- safety equipment, including:
 - barricades
 - fall prevention
 - PPE
 - scaffolds
 - signs

Hot work tasks may include:

- tools and equipment: electric, hydraulic or pneumatic.
- concrete cutting
- oxy-cutting and removal of structural steel
- oxy-cutting of reinforcement
- saw cutting of timber-framed buildings
- steel cutting.

Preparation of work areas may include:

- communicating with those who may be affected by the demolition task
- erecting scaffolding and dust protection
- identifying positions of hoses and cables clear of hazards
- installing supports and bracing
- location of signage and barricades
- providing for site safety.

Communication with work team may include:

- non-verbal communication, including immediate stop work flags or notices in the case of uncovered hazards that must be re-assessed
- verbal communication
- use of technological equipment.

Unit Sector(s)

Demolition

Custom Content Section

Not applicable.