Australian Government

ICTTEN2140B Use hand and power tools

Release 1

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

ICTTEN2140B Use hand and power tools

Modification History

Release	Comments
Release 2	This version first released with *ICT10 Integrated Telecommunications Training Package Version 3.0*. References to other units updated. Outcomes deemed equivalent.
Release 1	This version first released with *ICT10 Integrated Telecommunications Training Package Version 1.0*.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to safely use hand and power tools in the workshop and on the worksite.

It involves preparing for work, selecting, using and maintaining hand and power tools and cleaning up.

Application of the Unit

Technical staff who use hand and power tools apply the skills and knowledge in this unit. They may make use of safety equipment and workshop facilities.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	*Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.*

Elements and Performance Criteria

1. Prepare for work activity	1.1 Identify the type of work to be performed from ***work instructions***
	1.2 Select appropriate ***hand and power tools*** for the work to be performed
	1.3 ***Set up and check tools*** for use according to available ***information***
	1.4 Examine ***work environment*** and plan work with tools to maximise safety and productivity
	1.5 Clear and clean work area to make it free of obstructions and allow clear access to tools
2. Prepare work piece for tool use	2.1 Mount, support or align ***work piece*** correctly to the tool or machine to be used
	2.2 Anchor work piece securely where necessary to prevent movement
3. Operate hand and power tools	3.1 Use hand and power tools according to industry and enterprise ***safe working practices***
	3.2 Use ***safety equipment*** during tool operation according to industry and enterprise safe working practices
	3.3 Monitor tool operation continuously and discontinue use if abnormal operation occurs
	3.4 Clean the work area on completion of work
4. Maintain hand and power tools after use	4.1 Clean and store tools according to industry and enterprise safe working practices
	4.2 Report abnormal tool operation or other problems according to established procedures
	4.3 Perform programmed maintenance of tools according to work role
	4.4 Arrange inspection of power tools according to ***regulatory requirements***

Required Skills and Knowledge

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

Required skills

- communication skills to:
  - liaise with colleagues on technical and operational matters
  - record and report procedures
- literacy skills to interpret and understand the information required for the preparation and application of hand and power tools including:
  - equipment
  - manufacturer's instructions
  - materials safety data sheets
  - quality assurance procedures
  - work instructions
- planning and organisational skills to manage time, organise priorities and plan work
- safety awareness skills to:
  - apply precautions and required action to minimise, control or eliminate hazards associated with use of particular hand and power tools
  - select and use required personal protective equipment conforming to industry and occupational health and safety (OHS) standards
  - use relevant chemicals and cleaning agents and dispose of waste products
  - work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- task management skills to work systematically with required attention to detail and adherence to all safety requirements
- technical skills to:
  - select and use appropriate hand and power tools
  - use technical information for tools, processes, materials and equipment.
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Required knowledge

- electrical and compressed air safety
- equipment types, characteristics, technical capabilities and limitations
- features and operating requirements of hand and power tools
- general housekeeping policies and procedures
- industry and work site terminology
- information required to operate equipment according to a test specification
- job safety analysis (JSA) or safe work method statement
- legislation, codes of practice and other formal agreements that impact on the work activity
- manufacturer’s requirements for safe operation of equipment
- materials commonly used in the industry
- material safety data sheets (MSDS) and materials handling methods
- operational, maintenance and basic diagnostic procedures
- power sources

- specific OHS requirements relating to the activity and site conditions
- typical issues and challenges that occur onsite.

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	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: • interpret work orders relevant to the selection and use of tools • interpret specifications and instructions relating to the materials and equipment on which the tools are to be used • prepare work environment and set up tools for safe and effective use • perform work processes following all relevant safety requirements applying to the use of hand and power tools • monitor tool operation for correct operation during use • inspect completed work to verify correct tool operation and use • document and communicate work related information including reporting of faults and other problems • comply with all related OHS requirements and work practices.
Context of, and specific resources for assessment	Assessment must ensure: • sites where hand and power tools may be used • use of hand and power tools currently used in industry • relevant regulatory and equipment documentation that impact on the use of hand and power tools.
Methods of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct observation of the candidate setting and checking tools for use • direct observation of the candidate operating hand and power tools according to industry and enterprise safe working practices • oral or written questioning to assess required knowledge.

Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • ICTWHS2170B Follow WHS and environmental policy and procedures. Aboriginal people and other people from a non-English speaking background may have second language issues. Access must be provided to appropriate learning and assessment support when required. Assessment processes and techniques must be culturally appropriate, and appropriate to the oral communication skill level, and language and literacy capacity of the candidate and the work being performed. In all cases where practical assessment is used it will be combined with targeted questioning to assess required knowledge. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. Where applicable, physical resources should include equipment modified for people with special needs.

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.

Work instructions may include:	• charts and hand drawings
	• diagrams or sketches
	• MSDS
	• memos
	• plans
	• quality requirements:
	  • dimensions and tolerances
	  • material standards
	  • standards of work
	• recording and reporting of work outcomes
	• safe work procedures or equivalent related to using hand and power tools
	• signage
	• specifications
	• verbal or written and graphical instructions
	• work bulletins
	• work schedules.

Hand and power tools may include:	• hand tools:
	  • chisels
	  • crowbars
	  • files
	  • hacksaws
	  • hammers
	  • measuring equipment
	  • pliers
	  • pop riveting machines
	  • screwdrivers
	  • shovels
	  • spanners
	  • wire strippers
	• power tools:
	  • angle grinders
	  • circular saws

	• drills • grinders • hammer drills • jig saws • lifting and hoisting equipment.

Set up and check tools may include:	• inspect tools for:
	  • damage
	  • missing components
	  • other defects prior to use
	• install operating components (bits or blades) in tools
	• set or adjust tools.

Information may relate to:	• Australian and enterprise quality standards and procedures • enterprise or external personnel • enterprise work orders and instructions • industry codes and symbols • job procedures • product change policies and procedures • tool manufacturers' specifications, operating procedures and setting instructions.
Work environment may include:	• client site • hazardous or exposed conditions • operational indoor workplaces • operational outdoor workplaces • restricted or confined spaces.
Work piece may include blocks of:	• aluminium • bronze • plastic • stainless steel • steel • wood.

Safe working practices may refer to:	• barriers or screens to control access and minimise dust and noise
	• clearing route for safe placement of leads
	• control of hazardous materials
	• emergency procedures related to equipment operation:
	  • emergency shutdown and stopping
	  • evacuation
	  • extinguishing equipment fires
	  • organisational first aid requirements
	• handling of materials

	• identification of potential hidden hazards:
	  • 'blind' drilling in walls
	  • harmful gasses
	  • non-visible laser emission
	• place tools in safe positions when not in use
	• running electrical power leads to power supply so they are clear of traffic or covered where possible
	• use of fire fighting equipment
	• use of first aid equipment
	• use of tools and equipment
	• visually checking power leads for serviceability and safety
	• workplace environment and safety.

Safety equipment may include:	• earth leakage circuit breaker (ELCB)
	• personal protective clothing:
	  • earmuffs
	  • gloves:
	  • leather
	  • plastic
	  • rubber
	  • head protection
	  • kneepads
	  • masks
	  • protective suits
	  • safety boots
	  • safety glasses
	• rubber mats.

Regulatory requirements may include:	• environment protection legislation • Federal, state and territory legislation • OHS legislation relevant to workplace activities • workers' compensation legislation • workplace agreements and awards.

Unit Sector(s)

Telecommunications - Telecommunications networks engineering