



Australian Government

Department of Education, Employment and Workplace Relations

FPICOT3210B Sharpen cutting tools

Release: 1

FPICOT3210B Sharpen cutting tools

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to verify cutting tool dimensions, select and set up grinder and attachments, and sharpen cutting tools, including cutters, profile cutters, routers and other rotary cutting tools

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3210A Sharpen cutting tools

Application of the Unit

Application of the unit

The unit involves sharpening cutting tools in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills 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 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

ELEMENT	PERFORMANCE CRITERIA
1. Determine required cutting tool dimensions	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to sharpening <i>cutting tools</i> are identified and followed</p> <p>1.2. Work order is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Site documentation and drawings are obtained and reviewed to verify <i>cutting tool dimensions</i></p> <p>1.4. Cutter angles are checked to improve efficiency by minimising expended cutting energy in mill operations</p> <p>1.5. Cutting tool condition is checked against required dimensions, angles and finish</p> <p>1.6. Additional cutting processes are assessed and documented in line with workplace procedures</p>
2. Select and set up grinder	<p>2.1. Work is conducted using prescribed safe operating practices and in line with workplace procedures</p> <p>2.2. Suitable personal protective equipment and clothing are used and maintained</p> <p>2.3. Potential and existing risks and hazards in the work area are identified and controlled</p> <p>2.4. <i>Grinder and attachments</i> are selected and <i>set up</i> to suit required operations on cutting tool and final dimensions</p> <p>2.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
3. Sharpen cutting tool	<p>3.1. <i>Grinder operations</i> are conducted efficiently and safely in line with manufacturer recommendations</p> <p>3.2. Grinder is monitored for operational effectiveness and coolant is applied as required in line with manufacturer recommendations</p> <p>3.3. Cutting angles are maintained and cutting edges are ground until nicks, lands and other imperfections are removed in line with workplace procedures</p> <p>3.4. Cutting tool teeth are systematically checked for consistent measurements to specifications</p> <p>3.5. Cutting tool is removed and stored to maintain cutting edges in line with workplace procedures</p> <p>3.6. Cutting tools that cannot be sharpened or are damaged during the process and cannot be repaired are <i>dealt with</i> in line with site procedures,</p>

ELEMENT**PERFORMANCE CRITERIA**

manufacturer recommendations and environmental requirements

3.7. Faults, malfunctions and problems are recognised, recorded and reported in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; use safe workplace practices and procedures to sharpen cutting tools; sharpen a range of cutters, routers and tooling to enterprise required surface, finish and texture
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others
- Literacy skills sufficient to locate, interpret and apply relevant information and specifications in written, diagrammatic and verbal form; interpret and apply common industry terminology; convey information in written, sketch and verbal form; record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for sharpening cutting tools
- Environmental protection requirements, including the safe disposal of waste material, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for sharpening cutting tools
- Environmental risks and hazards
- Using energy effectively and efficiently
- Operational principles and limitations of cutting tools, grinders and attachments
- Types of rotary cutting tools
- Alternative grinding processes and equipment for sharpening cutting tools,

REQUIRED SKILLS AND KNOWLEDGE

including wheel selection

- Abrasive wheel technology, including wheel types, safe use and storage, cutting speeds, special applications, selection, specifications and design limitations
- Procedures for determining cutting tool dimensions
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

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

A person who demonstrates competency in this unit must be able to provide evidence that they can accurately determine cutting tool dimensions and select and set up appropriate grinding equipment to sharpen cutting tools using safe workplace practices and procedures

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to sharpening cutting tools
- following organisational policies and procedures relevant to sharpening cutting tools
- determining cutting tool dimensions
- selecting and setting up grinder and attachments
- safely sharpening cutting tools

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with

EVIDENCE GUIDE

application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required 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
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

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.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

RANGE STATEMENT

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage

RANGE STATEMENT

- requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Cutting tools** may include:
 - cutters
 - profile cutters
 - routers
 - other rotary cutting tools
- Appropriate personnel** may include:
 - supervisors
 - clients
 - colleagues
 - line management
- Cutting tool dimensions** include:
 - diameter
 - profiles
 - angles
 - tolerances
- Grinders and attachments** may include:
 - tool and cutter grinders
 - surface grinders
 - pedestal or bench grinders
 - mounted grinders and other specialist grinding equipment
 - slicers
 - mincer plates
 - chucks
 - collets
 - clamps
 - motorised or non-motorised attachments
 - dividing heads
 - stationary abrasive wheel dressing attachments
 - dial indicators
 - templates
 - air or manually-operated attachments, such as those used in helical grinding
 - drill bit holders
 - automatic feed systems
 - vices
 - resting brackets
- Set up** may include:
 - selecting and mounting grinding wheel on grinder
 - dressing grinding wheel to maintain cutting

RANGE STATEMENT

- Communication** may include:
- surface and suit cutting tool dimensions
 - configuring grinder attachments to suit cutting tool dimensions and profile
 - verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Grinder operations** may include:
- selecting grinding speeds and feeds to suit grinding wheel material and configuration, and cutting tool material
 - adjusting grinder to tool surfaces to ensure material removal remains within grinder and wheel capacities
- Dealing with** may include:
- recycling cutting tools that cannot be sharpened or are damaged during the process and cannot be repaired
 - sending cutting tools that cannot be sharpened or are damaged during the process and cannot be repaired to landfill

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical