



Australian Government

FWPCOT3210 Sharpen cutting tools

Release: 1

FWPCOT3210 Sharpen cutting tools

Modification History

Release	Comment
1	Replaces equivalent unit FPICOT3210B Sharpen cutting tools, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to verify cutting tool dimensions, select and set up grinder and attachments, and sharpen cutting tools. Tools include cutters, profile cutters, routers and other rotary cutting tools. Work is completed in a forest products factory setting.

The unit applies to Sawdoctor, Sawmaker, Saw Repairer.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Common Technical

Elements and Performance Criteria

<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Determine required cutting tool dimensions	1.1 Review work order and where required check with appropriate personnel. 1.2 Obtain site documentation and drawings and verify cutting tool dimensions. 1.3 Check cutter angles to improve efficiency of expended cutting energy in mill operations.

	1.4 Check cutting tool condition against required dimensions, angles and finish. 1.5 Assess and document additional cutting processes in line with work order.
2. Select and set up grinder	2.1 Select appropriate repair, maintenance and personal protective equipment and check for operational effectiveness. 2.2 Select grinding wheel of appropriate diameter to suit sharpening requirements and mount on grinder. 2.3 Dress grinding wheel to maintain cutting surface and suit cutting tool dimensions. 2.4 Configure grinder attachments to suit cutting tool dimensions and profile.
3. Operate grinder to sharpen cutting tool blades	3.1 Follow organisational safety procedures and manufacturer's recommendations throughout all repair and maintenance processes. 3.2 Select grinding speeds and feeds to suit cutting tool material, grinding wheel material and configuration. 3.3 Maintain cutting angles and grind cutting edges to remove nicks, lands and other imperfections. 3.4 Check cutting teeth systematically for consistent measurements to specifications. 3.5 Monitor grinder for operational effectiveness and apply coolant as required. 3.6 Remove cutting tool and store to maintain cutting edges. 3.7 Dispose of unserviceable and damaged cutting tools in line with environmental protection practices. 3.8 Record and report processing problems and equipment faults to appropriate personnel.

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	- interpret required tool dimensions from equipment specifications and drawings - read basic grinding wheel settings; set and adjust speeds to suit cutting tool material - complete precise calculations to machine cutting tools to
---------------------	---

	specified profile and angle.
Oral communication skills to:	ask open and closed probe questions and actively listen to clarify content of work orders.
Reading skills to:	- interpret documents: - workplace health and safety and other organisational procedures - work orders - manufacturers' maintenance recommendations.
Writing skills to:	complete basic accurate records for processing problems and equipment faults.
Planning and organising skills to:	efficiently and logically sequence the stages of preparation and repair work using work order to guide activities.

Range of Conditions

Not Applicable

Unit Mapping Information

FPICOT3210B Sharpen cutting tools

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3210 Sharpen cutting tools

Modification History

Release	Comment
1	Replaces equivalent unit FPICOT3210B Sharpen Cutting tools, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format. Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including Required Skills and Knowledge, Evidence Guide and Range Statement

Performance Evidence

- A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:
- follow organizational policies and procedures relevant to sharpening cutting tools
- determine cutting tool dimensions
- select and set up grinder and attachments
- sharpen cutting tools in line with an individual work order
-

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- purpose, features and operation of cutting equipment for which cutters are sharpened:
 - cutters
 - profile cutters
 - routers
- purpose, features, operation and limitations of tools and equipment used to sharpen cutting tools:
 - grinding machines
 - grinding machine attachments
 - abrasive grinding wheels
- methods for:

- determining cutting tool dimensions
- removing cutters from cutting equipment
- assessing cutter condition
- selecting appropriate grinding wheels; diameter and material
- sharpening cutters to specified requirements
- setting cutters to a specified profile
- pitch and angles at which cutters are sharpened
- abrasive wheel technology, including wheel types, safe use and storage, cutting speeds, special applications, selection, specifications and design limitations.
- range of speeds at which abrasive wheels can be operated without damaging cutting tools
- environmental protection practices for repairing and maintaining tools and equipment in forest products factory settings:
 - reducing water and energy use
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing materials
- organisational procedures specific to sharpening cutting tools:
 - workplace health and safety with particular emphasis on equipment lock out and use of personal protective equipment
 - communication reporting lines
 - recording and reporting processing problems and equipment faults.
-

Assessment Conditions

The following resources must be made available:

- tools and equipment used to sharpen cutting tools including grinders and one or more of the following:
 - abrasive grinding wheels in a variety of diameters
 - slicers
 - mincer plates
 - chucks
 - collets
 - clamps
 - dividing heads
 - drill bit holders
 - vices
 - resting brackets
- cutting equipment for which cutters are to be sharpened:
 - cutters
 - profile cutters
 - routers

- coolant
- personal protective equipment suitable for sharpening cutting tools
- manufacturers' instructions for use, repair and maintenance of equipment
- work order for repair and maintenance activities with specific instructions for sharpening cutting tools in specified equipment
- template documents for recording processing problems and equipment faults
- organisational policies and procedures for sharpening cutting tools.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>