



Australian Government

FWPCOT3276 Sharpen cutters using a straight knife grinder

Release: 1

FWPCOT3276 Sharpen cutters using a straight knife grinder

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to sharpen cutters using a straight knife grinder.

The unit applies to individuals who sharpen cutters on a straight knife grinder for use on a moulder/planer to produce timber with simple profiles such as DAR (dressed all round) boards, either with a square edge or pencil round edge, or skip-dressed boards. Straight cutters are also used on veneer cutting machines and chippers.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

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

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	1.1 Review work order to determine job requirements and, where required, seek clarification from appropriate personnel 1.2 Review workplace health and safety procedures, including the use of personal protective equipment, equipment lock-out and safe manual

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	handling techniques 1.3 Identify, assess and take actions to mitigate risks and hazards associated with sharpening cutters using a straight knife grinder 1.4 Identify workplace environmental protection procedures for minimising and disposing of waste material, cleaning tools and equipment, and maximising energy efficiency 1.5 Consult with appropriate personnel to ensure that work is coordinated effectively with others in the workplace 1.6 Obtain tools, equipment and testing devices needed for the work and check for correct operation and safety
2. Clean and check cutters before sharpening	2.1 Clean cutters according to workplace procedures 2.2 Check cutters for faults and take remedial action according to workplace procedures 2.3 Match cutters in pairs for dimension, shape and weight, and mark according to workplace procedures
3. Prepare grinder	3.1 Clean grinder and work area according to workplace procedures 3.2 Select grinding wheel and grinding speed according to workplace procedures 3.3 Check grinding wheel for faults and take remedial action according to workplace procedures 3.4 Fit grinding wheel and check grinder operation according to manufacturer and workplace procedures 3.5 Check and dress grinding wheel according to manufacturer and workplace procedures
4. Mount cutters and adjust grinder	4.1 Set cutters in grinder according to manufacturer procedures 4.2 Set grinding angle according to manufacturer and workplace procedures 4.3 Adjust clearance between grinding wheel and cutters according to manufacturer specifications 4.4 Set wheel advance according to manufacturer specifications 4.5 Set traversing stops according to manufacturer specifications 4.6 Check and top up coolant level according to manufacturer specifications

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
5. Sharpen cutters	5.1 Clean and lubricate grinder as required, according to manufacturer specifications 5.2 Select and fit correct grinding wheel and set angles according to manufacturer specifications 5.3 Mount cutters for grinding according to manufacturer specifications 5.4 Check operation of grinder for problems after the first pass according to workplace procedures 5.5 Maintain coolant flow rate and cleanliness during wet grinding according to workplace procedures 5.6 Sharpen cutter edges to the specified angle according to workplace procedures 5.7 Ground cutter edges to a constant straight line according to workplace procedures 5.8 Hone cutters and remove burrs according to workplace procedures 5.9 Clean grinder after sharpening according to workplace procedures
6. Check and store sharpened cutters	6.1 Check cutter repairs and re-ground where required according to workplace procedures 6.2 Set up balancing equipment according to manufacturer specifications 6.3 Measure cutter weight and take remedial action when excess weight is detected according to workplace procedures 6.4 Store cutters in matched pairs or sets according to workplace procedures 6.5 Record and report work outcomes, equipment faults and maintenance requirements to appropriate personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Numeracy	Measures finished dimensions against specifications and allowable tolerances
Navigate the world of work	Understands main tasks, responsibilities and boundaries of own role
Interact with others	Uses modes of communication suitable to purpose to confirm and clarify understanding
Get the work done	Recognises and responds to routine problems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT3276 Sharpen cutters using a straight knife grinder	FWPCOT3210 Sharpen cutting tools	The original unit has been replaced by three units, including this unit, to define specific skills required of operators for using different methods and equipment for sharpening different types of cutters to produce timber with simple and complex profiles	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3276 Sharpen cutters using a straight knife grinder

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has sharpened cutters using a straight knife grinder and has:

- followed work order and relevant workplace health and safety and environmental protection procedures
- cleaned and checked cutters prior to sharpening
- prepared the grinder
- mounted the cutters and adjusted the grinder
- checked and stored the sharpened cutters'
- completed workplace reports.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose, features, operating parameters, components and operation of straight knife grinders used to sharpen cutters
- equipment used in setting up and running straight knife grinders
- types of cutters used to produce simple profiles
- types, effects and remedial action for dealing with cutters faults:
 - warp
 - cracks
 - chips
 - burns
 - delamination
 - raised spots
- types, effects and remedial action for dealing with grinding wheel faults:

- cracks
- clogging
- effects of incorrect set-up of coolant flow, traversing stops, traversing speed, wheel advance, grinding angle
- problems associated with operation of grinder:
 - burning
 - incorrect grinding angle
 - incorrect cutter set-up
- defects in cutter edges after sharpening:
 - burning
 - chipping
- procedures for:
 - checking and cleaning cutters prior to sharpening
 - preparing grinder
 - mounting cutters in grinder
 - sharpening cutters
 - storing cutters
- types and applications of simple profiles:
 - dressed all round (DAR) boards, either with a square edge or pencil round edge
 - skip-dressed boards
- types and effects of hazards and control measures associated with using grinders:
 - grinding wheel disintegration
 - loose grinding wheel
 - exposure to grinding coolant
- workplace procedures specific to using straight knife grinders:
 - workplace health and safety, with particular emphasis on equipment lock-out, isolation procedures, machine guarding and use of personal protective equipment (PPE)
 - communication reporting lines
 - recording and reporting production outcomes, equipment faults and maintenance requirements
 - environment protection legislation relating to sawmill operations.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a timber processing or manufacturing facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - straight knife grinder
 - cutters for simple profiles

- tools for setting up straight knife grinder
- PPE for sharpening cutters using a straight knife grinder
- cutters
- lubricant
- coolant
- specifications:
 - template documents for recording work outcomes, equipment faults and maintenance requirements
 - manufacturer instructions for sharpening cutters using a straight knife grinder
 - work order with specific instructions for sharpening cutters using a straight knife grinder
 - workplace procedures for sharpening cutters using a straight knife grinder.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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