Modification history

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

| FWPCOT3XXX | Sharpen cutters using a straight knife grinder  |
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| Application | This unit of competency describes the skills and knowledge required to sharpen cutters using a straight knife grinder. Straight cutters are used on a computer numerically controlled (CNC) or semi-automated multi-headed 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.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 or on a veneer cutting machine or chipper.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 occupational licensing, legislative or certification requirements apply to this unit at the time of publication. |
| Prerequisite Unit | Nil  |
| Unit Sector | Common Technical |

| Elements | Performance Criteria |
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| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Prepare for work  | 1.1 Review work order to determine job requirements and where required seek clarification from appropriate personnel1.2 Identify and apply workplace health and safety requirements including use of personal protective equipment, equipment lockout and safe manual handling techniques1.3 Identify, assess and take actions to mitigate risks and hazards associated with sharpening cutters on a straight knife grinder 1.4 Identify and implement workplace procedures for minimising waste material and maximising energy efficiency1.5 Consult with appropriate personnel to ensure that work is coordinated effectively with others in the work place1.6 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 procedures2.2 Check cutters for faults and take remedial action according to workplace procedures2.3 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 procedures3.2 Select grinding wheel and grinding speed according to workplace procedures3.3 Check grinding wheel for faults and take remedial action according to workplace procedures3.4 Fit grinding wheel and check grinder operation according to manufacturer and workplace procedures3.5 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 procedures4.3 Adjust clearance between grinding wheel and cutters according to manufacturer specifications4.4 Set wheel advance according to manufacturer specifications4.5 Set traversing stops according to manufacturer specifications4.6 Check and top up coolant level according to manufacturer specifications |
| 5. Sharpen cutters | 5.1 Clean and lubricate grinder as required, according to manufacturer specifications5.2 Select and fit correct grinding wheel and set angles according to manufacturer specifications5.3 Mount cutters for grinding according to manufacturer specifications5.4 Check operation of grinder for problems after the first pass according to workplace procedures5.5 Maintain coolant flow rate and cleanliness during wet grinding according to workplace procedures5.6 Sharpen cutter edges to the specified angle according to workplace procedures5.7 Ground cutter edges to a constant straight line according to workplace procedures5.8 Hone cutters and remove burrs according to workplace procedures5.9 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 procedures6.2 Set up balancing equipment according to manufacturer specifications6.3 Measure cutter weight and take remedial action when excess weight is detected according to workplace procedures6.4 Store cutters in matched pairs or sets according to workplace procedures6.5 Record and report work outcomes, equipment faults and maintenance requirements to appropriate personnel |

| Foundation SkillsThis 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. |
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| Skill | Description |
| Numeracy | * Measure finished dimensions against specifications and allowable tolerances
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| Navigate the world of work | * Understand main tasks, responsibilities and boundaries of own role
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| Interact with others | * Use modes of communication suitable to purpose to confirm and clarify understanding
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| Get the work done | * Recognise and respond to routine problems
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| Unit Mapping Information |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| FWPCOT3XXX 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. | Non-equivalent |

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

| TITLE | Assessment requirements for FWPCOT3XXX Sharpen cutters using a straight knife grinder   |
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| Performance Evidence |
| An individual demonstrating competency must satisfy all 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:* worked safely including following workplace health and safety 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 .
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| Knowledge Evidence |
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| 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:
* DAR (dressed all round) 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 lockout, 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.
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| Assessment Conditions |
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| Assessment of the skills in this unit of competency 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 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. |

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