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 | Manufacture profile cutters |
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| Application | This unit of competency describes the skills and knowledge required to manufacture profile cutters by selecting appropriate material and machining blanks to specified profiles. Profile cutters are used in moulders and planers to produce profiled timber.  The unit applies to individuals who manufacture profile cutters in a saw technician workshop or sawmill facility.  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; applies across sectors |

| 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 to manufacture profile cutter | 1.1 Review work order to determine job requirements and where required seek clarification from appropriate personnel  1.2 Review environmental protection practices and workplace health and safety requirements including the use of personal protective equipment, equipment lockout and safe manual handling techniques  1.3 Identify, assess and take actions to mitigate risks and hazards associated with manufacturing profile cutters  1.4 Identify and implement workplace procedures for minimising and disposing of waste material, cleaning tools and equipment and maximising energy efficiency  1.5 Obtain information about timber and equipment and review to determine the preferred material type and profile cutter dimensions  1.6 Select the required tools and equipment and check for operational effectiveness  1.7 Select material and cut to suitable lengths for machining profile cutter blank |
| 2. Machine blank | 2.1 Use equipment according to workplace safety procedures, manufacturer instructions and environmental protection practices  2.2 Determine blank dimensions, industry standards and workplace tolerances according to work order  2.3 Set up machining equipment according to manufacturer instructions  2.4 Machine blank to the required dimensions and tolerances using selected processes  2.5 Check blank surface finish and dimensions against specifications |
| 3. Machine required profiles | 3.1 Position blank in suitable attachments to machine tooth profiles  3.2 Confirm that the profiles meet cutting requirements regarding material to be cut, speed, direction and cutting angle  3.3 Complete set-up and machine blanks to ensure each tooth profile and dimension meets required tolerances  3.4 Check profile surface finish and dimensions against specifications  3.5 Dispose of sub-standard profiled material according to workplace procedures and environmental protection practices  3.6 Record and report production output, processing problems and equipment faults 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. | |
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| Skill | Description |
| Numeracy | * Perform basic measurement tasks * Use standard measurement units to describe dimensions of blanks |
| Numeracy | * Complete precise calculations to machine and profile cutters to specified diameters, profiles, widths, lengths and angles within tolerances |
| Navigate the world of work | * Identify main tasks, responsibilities and boundaries of own role |
| Interact with others | * Use modes of communication suitable to purpose to confirm and clarify understanding |
| 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 Manufacture profile cutters | FWPCOT3213 Manufacture cutting tools | Updated Application for clarity; reworded Element 1; added a Performance Criteria; added a new Knowledge Evidence; updated unit code and title for clarity and compliance. | 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 Manufacture profile cutters |
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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 the individual has manufactured at least three cutters with different profiles, and has:   * read and clarified work order * prepared to manufacture profile cutter * safely machined blank to specification * safely machined specified profiles * recorded and reported production output, processing problems and equipment faults. | |

| 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:   * basic knowledge of physics of sawing including: * saw blade material and properties * impact of timber properties on saw blades * direction of cut * forces on a blade * heat removal * sawtooth configuration * features and operation of tools and equipment used to machine and profile blanks for profile cutters * importance of profiling profile cutters to match requirements for: * characteristics of various materials sawn * speed of the cutting process * direction of the cutting process * cutting angle * profile cutter specifications * methods for: * calculating profile cutter dimensions * machining and profiling blanks to the required profile * assessing surface finish and measuring the dimensions of the finished profile cutter against specifications and tolerances * industry standard and organisational tolerances * types of risk and hazards and mitigation measures associated with manufacturing profile cutters * workplace procedures specific to manufacturing profile cutters: * workplace health and safety with particular emphasis on equipment lockout,use of personal protective equipment (PPE) and safe manual handling techniques * communication reporting lines * recording and reporting processing problems and equipment faults * environmental protection practices for timber processing and manufacturing facilities: * reducing water and energy use * cleaning plant, tools and equipment * disposing of, recycling and reusing materials. |

| 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 saw technician workshop, sawmill or an environment that accurately represents workplace conditions * resources, equipment and materials: * tools and equipment used to machine and profile blanks for profile cutters * measuring equipment including vernier callipers, micrometers and rules * blank stock for profile cutters * personal protective equipment (PPE) suitable for manufacturing profile cutters * specifications: * template documents for recording processing problems and equipment faults * manufacturer instructions for use, repair and maintenance of equipment * work order for machining activities with specific instructions for manufacturing profile cutters * workplace procedures for manufacturing profile cutters.   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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