



Australian Government

FWPCOT3281 Manufacture profile cutters

Release: 1

FWPCOT3281 Manufacture profile cutters

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 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 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 to manufacture profile cutter	1.1 Review work order to determine job requirements and, where required, seek clarification from appropriate personnel 1.2 Review workplace health and safety requirements, including the use of personal protective equipment, equipment lock-out and safe manual handling techniques

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify, assess and take actions to mitigate risks and hazards associated with manufacturing profile cutters 1.4 Identify environmental 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 Complete set-up and machine blanks to ensure each tooth profile and dimension meets required tolerances 3.3 Check profile surface finish and dimensions against specifications regarding material to be cut, speed, direction and cutting angle 3.4 Dispose of sub-standard profiled material according to workplace procedures and environmental protection practices 3.5 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.

Skill	Description
Numeracy	Completes precise calculations to machine and profile cutters to specified diameters, profiles, widths, lengths and angles within 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
FWPCOT3281 Manufacture profile cutters	FWPCOT3213 Manufacture cutting tools	Updated application for clarity; reworded element 1; revised knowledge evidence; updated unit code and title for clarity and compliance	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 FWPCOT3281 Manufacture profile cutters

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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 the individual has manufactured at least three cutters with different profiles, and has:

- followed work order and relevant workplace health and safety and environmental protection procedures
- prepared to manufacture profile cutter
- machined blank to specification
- machined specified profiles
- checked profile surface finish and dimensions against specifications
- recorded and reported production output, processing problems and equipment faults.

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:

- 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 manufacturing 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 lock-out, use of personal protective equipment (PPE) and safe manual handling techniques
 - communication reporting lines
 - recording and reporting of 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

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a saw technician workshop, a 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
 - 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.

Links

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