



Australian Government

FWPTMM3211 Manufacture using joinery machines

Release: 1

FWPTMM3211 Manufacture using joinery machines

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 operate mortise and tenon machines, borers and routers to cut and drill machined joints in timber. This includes identifying work requirements, setting up and operating joinery machines, and completing routine equipment maintenance.

The unit applies to individuals who operate joinery machines in a timber processing or manufacturing facility.

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

Pre-requisite Unit

Nil

Unit Sector

Timber Manufactured Products

Timber Merchandising

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 profiling	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 handling techniques 1.3 Identify, assess and take actions to mitigate risks and hazards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	associated with using joinery machines 1.4 Identify workplace environmental protection procedures for minimising and disposing of waste material, cleaning tools and equipment, and maximising energy efficiency 1.5 Obtain type and quantity of material to be machined from storage location 1.6 Select appropriate equipment, including cutting blades or drills, and check for operational effectiveness according to manufacturer recommendations 1.7 Plan manufacturing sequence
2. Set up profile	2.1 Complete equipment pre-start-up checks according to workplace and manufacturer procedures 2.2 Select machine guides and attach to machinery 2.3 Install cutting blades or drills into selected machinery 2.4 Set depth and width of cut or hole according to required process and to minimise waste 2.5 Position material stack in close proximity to maximise ease of machine feeding 2.6 Test equipment set-up for depth and width through trial run on timber, and adjust as required
3. Operate machine	3.1 Feed material into machine at feed rate according to workplace requirements 3.2 Use equipment and machinery according to workplace procedures, manufacturer instructions and environmental protection practices 3.3 Follow, maintain and adjust manufacturing sequence to produce required quantity and maximise feed rate 3.4 Check manufacturing process regularly and adjust to maintain desired depth and width of cut or hole 3.5 Reject material with defects, and reuse, recycle or dispose of according to environmental protection practices 3.6 Stack material safely in designated location according to work order requirements 3.7 Report equipment faults to appropriate personnel 3.8 Complete and maintain accurate records and reports of machining

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	outcomes according to workplace procedures
4. Complete operator maintenance	4.1 Follow workplace safety procedures to lock out equipment 4.2 Check cutting blades and drills for bluntness or damage 4.3 Remove and replace cutting blades and drills according to manufacturer recommendations 4.4 Dispose of used blades and drills according to workplace procedures and environmental protection practices 4.5 Keep machine area clear of dust and debris according to workplace requirements

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
Reading	Interprets key requirements in workplace health and safety and environmental procedures for clearing sawn waste from work area
Writing	Completes basic written production reports and tally sheets
Oral communication	Responds to oral questions on routine matters related to output quality
Numeracy	- Uses basic arithmetic skills to determine quantity and dimensions of joinery materials - Uses standard units of measure to determine dimensions of finished material - Interprets graphical information in charts to identify the feed rate to optimise quality and quantity of production output
Navigate the world of work	Follows workplace policies and procedures relevant to work role
Interact with others	Participates in conversations to inform maintenance staff about equipment faults
Get the work done	Identifies and responds to routine problems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPTMM3211 Manufacture using joinery machines	FWPTMM3202 Manufacture using joinery machines	Reworded application; added performance criteria relating to workplace health and safety; revised performance evidence for mapping; updated foundation skills	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 FWPTMM3211 Manufacture using joinery machines

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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, on at least one occasion, safely set up, calibrated, operated and maintained one or more of the following joinery machines:

- mortise and tenon
- borers
- routers.

In doing the above job, the individual has:

- followed work order and relevant workplace health and safety and environmental protection procedures
- set up profile
- operated machine according to workplace procedures and work order requirements
- safely cleared sawn or machined materials and waste from the joinery machine
- checked, sorted and stacked the finished product
- disposed of waste material
- completed production 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:

- features and uses of these types of machined joints:
 - grooves
 - rebates
 - bevels
 - trenches
 - mortises

- tenons
- holes
- cutting and drilling techniques and processes, including feed rates and finish
- types, purpose, features, operation and basic non-specialist repair and maintenance of cutting and drilling tools and equipment:
 - measuring equipment
 - saws
 - routing machines
 - single or double end tenoners
 - mortisers
 - borers
 - multi-borers
 - drill presses
 - mortising chisels
 - tenoning saws or chains
- environmental protection practices for forest products factory settings:
 - reducing water and energy use
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing timber and other waste
- workplace procedures specific to production activities using joinery machines:
 - workplace health and safety, with particular emphasis on personal protective equipment (PPE) and equipment lock-out
 - use and maintenance of equipment
 - communication reporting lines
 - recording and reporting cutting process and equipment faults.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a forest and forest products factory setting or an environment that accurately reflects workplace conditions
- resources, equipment and materials:
 - cutting and drilling tools and equipment: measuring equipment, saws, routing machines, single or double end tenoners, mortisers, borers, multi-borers, drill presses
 - cutting blades and drills: square and angular router cutting bits, drills in varying sizes, mortising chisels, tenoning saws and chains, trenching heads
 - maintenance tools and equipment for cutting and drilling tools
 - consumable components: cutting blades and drills
 - PPE suitable for cutting and drilling activities
 - a diverse, comprehensive and commercial product range of timber

- manufacturer instructions for use and maintenance of equipment
- template reports for recording processing and equipment faults
- specifications:
 - access to work order for production activities, with specific instructions for the cutting, drilling and storage of timber and timber products
 - access to written workplace procedures for production activities using joinery machines.

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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