



Australian Government

FWPSAW3249 Saw logs using CNC optimising systems

Release: 1

FWPSAW3249 Saw logs using CNC optimising systems

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 set up and operate computer numerical control (CNC) optimising systems and saws to maximise timber output from every log.

The unit applies to individuals who saw logs using CNC optimising systems in forest and forest product factory settings.

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

Pre-requisite Unit

Nil

Unit Sector

Sawmilling and Processing (SAW)

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 machining	1.1 Review work order and, where required, check with 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 associated with manufacturing profile cutters 1.4 Identify workplace environmental protection procedures for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	minimising and disposing of waste material, cleaning tools and equipment, and maximising energy efficiency 1.5 Plan log sawing process in line with work order
2. Set up optimising system	2.1 Set CNC optimising program to job specifications 2.2 Check safety equipment and saw and cutting mechanisms for safe and effective operation 2.3 Adjust saw settings in line with work order 2.4 Conduct trial runs to check system operation, accuracy and quality of finished work 2.5 Complete final adjustments to CNC optimising program and equipment in line with organisational procedures
3. Operate optimising log saw	3.1 Use equipment in line with organisational safety procedures, manufacturer instructions and environmental protection practices 3.2 Complete pre-start-up checks to ensure operational effectiveness 3.3 Feed logs into machine, operate saw and monitor use to minimise waste and ensure quality product and output 3.4 Repair or dispose of sub-standard product in line with environmental protection practices 3.5 Direct processed logs to designated area in line with work order 3.6 Identify routine processing problems, and resolve or report to appropriate personnel
4. Complete operator maintenance	4.1 Follow organisational safety procedures to lock out equipment 4.2 Check saw blades for bluntness or damage 4.3 Remove and replace saw blades in line with manufacturer recommendations 4.4 Dispose of used blades in line with environmental protection practices 4.5 Complete basic non-specialist maintenance for equipment 4.6 Keep machine clear of dust and debris in line with organisational safety procedures 4.7 Record and report 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
Reading	Extracts essential information from complex technical documents and manuals to determine safe operating and maintenance procedures
Writing	Prepares routine written reports using the required format, language and structure
Oral communication	Employs active listening and questioning to clarify content of equipment history records
Numeracy	- Performs precise mathematical calculations to determine the correct alignment of key parts of the sawing system according to specified settings - Uses basic mathematical symbols and conventions in completing workplace reports related to alignment activities
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
FWPSAW3249 Saw logs using CNC optimising systems	FWPSAW3226 Saw logs using CNC optimising systems	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 FWPSAW3249 Saw logs using CNC optimising systems

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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:

- followed work order and relevant workplace health and safety and environmental protection procedures
- sawn logs using computer numerical control (CNC) optimising systems in line with work order and within prescribed organisational tolerances
- set computer programs for the CNC optimising system to follow
- completed the following basic non-specialist maintenance activities:
 - cleaning the machine of wood chips and sawdust
 - replacing blunt saw blades
 - inspecting machine parts for wear or damage, including guards
 - greasing and lubricating moving parts
 - checking the operation of emergency stop buttons and lock-out systems.

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:

- environmental protection practices for forest products factory settings:
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing timber
 - reducing water and energy use
- typical log defects and how they affect ability to produce quality flitches and cants:
 - warp
 - wane
 - curvature

- cupping
- shakes
- insect defects
- knots
- resin pockets
- typical workflow processes for sawing flitches and cants with CNC optimising saws
- typical flow of log supply in and out of the sawing area
- range of cutting patterns used on logs to achieve maximum output of flitches and cants
- range of feed rates and how they affect production output and finished quality of flitches and cants
- purpose, features and operation of CNC optimising and other equipment used to saw flitches and cants:
 - CNC optimising saws
 - CNC computer program
 - mechanical feed
 - conveyor system to transport logs to and from the sawing area
 - maintenance tools and equipment for saws
- methods for assessing saw blade condition
- organisational procedures specific to operating CNC optimising saws:
 - workplace health and safety, with particular emphasis on equipment lock-out and use of personal protective equipment (PPE)
 - communication reporting lines
 - recording and reporting of processing problems and equipment faults.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a timber processing plant or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - CNC optimising saws
 - CNC computer program
 - maintenance tools and equipment for saws
 - consumable saw blades
 - PPE suitable for operating CNC optimising saws
 - a diverse, comprehensive and commercial range of logs
- specifications:
 - manufacturer instructions for use, repair and maintenance of equipment
 - work order with specific instructions for sawing logs and despatch to downstream processing

- template documents for recording equipment faults and maintenance requirements
- workplace procedures for operating CNC optimising saws.

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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