



Australian Government

FWPSAW3239 Assess and maintain wide band saw blades

Release: 1

FWPSAW3239 Assess and maintain wide band saw blades

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 level, tension, back gauge, weld and replace teeth on wide band saw blades that are over 70mm in width.

The unit applies to individuals who maintain wide band saw blades in a forest and forest product factory setting.

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

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 maintenance	1.1 Review work order to determine job requirements and, where required, seek clarification from appropriate personnel 1.2 Review environmental protection procedures and workplace health and safety requirements, 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 maintaining wide band saw blades 1.4 Identify and implement workplace procedures for minimising waste material and maximising energy efficiency 1.5 Select appropriate tools and equipment, and check for operational effectiveness according to manufacturer recommendations 1.6 Plan maintenance process according to work order and workplace requirements
2. Assess saw blade condition	2.1 Remove wide band saw blade from machinery 2.2 Handle saw blade to avoid damaging teeth 2.3 Clean foreign material from blade surfaces 2.4 Inspect saw blade to assess the condition of teeth, tips and saw blade 2.5 Check and mark teeth or tips requiring repair or replacement 2.6 Declare saw blades unserviceable where hazardous defects are found, or blade has become too narrow for use 2.7 Segregate and dispose of unserviceable saw blades according to workplace procedures and environmental protection practices
3. Level, tension and back gauge saw blade	3.1 Use a straight edge to identify lumps and ridges across and along saw blade on both sides of the blade 3.2 Remove ridges or lumps progressively by levelling the saw blade with hammers, levelling attachments or stretcher rolls 3.3 Control rolling patterns to induce the correct amount of tension into the saw blade 3.4 Use a tension gauge of appropriate curvature to verify the saw blade has sufficient tension, and tension is correctly positioned across the blade and is evenly distributed along the length of the blade 3.5 Use an accurate back-gauge to check back length, and roll nonconforming areas to adjust back length to workplace tolerance
4. Repair teeth and blade cracks	4.1 Place saw blade in welding jig for heat application and welding activities 4.2 Check amount of damaged tooth to be removed or crack to be repaired and mark weld line 4.3 Remove metal to proposed line, prepare the edge for welding and clean burn marks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.4 Apply heat and pressure to prepare worn, broken or ground surface for metal build-up or replacement 4.5 Build up or replace teeth or cracked area using material and processes that ensure specified metal penetration and density 4.6 Use weld run-off tabs to limit stress and hollows at edges of the saw blade 4.7 Grind or file teeth or cracks to required shape, tolerance and pitch 4.8 Dispose of saws with irreparable teeth, tips or blades according to workplace procedures and environmental protection practices 4.9 Identify routine processing and equipment faults, and resolve or report 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 operational manuals to determine safe operating procedures for equipment
Writing	Prepares routine written reports using the required format, language and structure
Oral communication	Employs active listening and questioning to clarify content of work orders
Numeracy	Uses a gauge to measure results of hammering and/or rolling the blade
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
FWPSAW3239 Assess and maintain wide band saw blades	FWPSAW3220 Maintain wide band saw blades	Reworded application statement for clarity; revised performance criteria of element 3; updated performance evidence for mapping; updated knowledge evidence and assessment conditions for clarity and mapping; updated unit code and title to reflect changes and for 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 FWPSAW3239 Assess and maintain wide band saw blades

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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
- removed and replaced saws from equipment
- assessed saw condition
- levelled, tensioned and measured the back-crown of the saw blade
- repaired teeth and blade cracks
- used welding processes and materials to produce:
 - weld beads that provide full penetration fusing together adjacent metal parts
 - welds free from any faults that would have the potential to weaken the strength and endurance capability of the weld deposit and weld zone.

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:

- purpose, features and operation of wide band saw blade for which repairs are completed
- features and names of different parts of wide band saw blades
- purpose, features and operation of tools and equipment used to repair and maintain wide band saw blades:
 - hammers
 - stretcher or tension rolls
 - levelling rolls
 - tension gauges and straight edges, back-gauges
 - welding equipment and welding materials

- importance of levelling and tensioning blades and applying curvature to match workplace requirements for:
 - characteristics of various materials sawn
 - speed of the sawing process
 - direction of the sawing process
 - saw blade specifications
- methods for:
 - removing saw blades from band saws
 - assessing saw blade condition
 - levelling and tensioning blades to specified requirements
 - assessing curvature
 - welding to build up and replace teeth
 - grinding and filing rebuilt or replaced teeth to required shape, tolerance and pitch
- basic knowledge of physics of sawing:
 - saw blade material and properties
 - impact of timber properties on saw blades
 - direction of cut
 - forces on a blade
 - heat removal
 - sawtooth configuration
- characteristics of metal used in wide band saw blades, and range of forces which can be applied without damaging blades
- types of risk and hazards and mitigation measures associated with maintaining wide band saw blades
- workplace procedures specific to maintaining wide band saw blades:
 - 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 and equipment faults
- environmental protection practices for repairing and maintaining tools and equipment in sawmills:
 - 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 sawmill or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - hammers
 - stretcher or tension rolls
 - levelling rolls and attachments
 - tension gauges and straight edges, back-gauges
 - welding equipment
 - heating and annealing equipment
 - welding jigs
 - run-on and run-off tabs
 - punches
 - engineers' hammers
 - angle grinders
 - sanders
 - hand files
 - abrasive paper or cloth
 - welding material
 - wide band saw blades to be maintained
 - PPE suitable for repairing and maintaining wide band saw blades
- specifications:
 - manufacturer instructions for use, repair and maintenance of equipment
 - work order with specific instructions for repairing wide band saw blades
 - documents, spreadsheets and proformas for recording processing and equipment faults
 - workplace procedures for maintaining wide band saw blades.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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