



Australian Government

FWPSAW3237 Level and tension circular saw blades

Release: 1

FWPSAW3237 Level and tension circular 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 and tension circular saw blades for circular saws and hot saws. This activity includes inspecting saws, repairing defects such as dished blades, damaged teeth and cracks, levelling ridges and lumps, and tensioning the saw.

The unit applies to individuals who level and tension circular saw blades in a saw technician workshop or timber processing 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

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 repair	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

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	handling techniques 1.3 Identify, assess and take actions to mitigate risks and hazards associated with levelling and tensioning circular saw blades 1.4 Identify workplace environmental protection procedures for minimising and disposing of waste material, cleaning tools and equipment, and maximising energy efficiency 1.5 Select appropriate repair and maintenance equipment, and check for operational effectiveness according to manufacturer recommendations
2. Assess saw blade condition	2.1 Remove and replace circular saw blades from sawing equipment 2.2 Handle saws to avoid damaging teeth 2.3 Clean foreign material on saw blade surfaces for inspection 2.4 Inspect saw blade to assess the condition of teeth and saw plate 2.5 Declare saw blade unserviceable where hazardous defects are found 2.6 Segregate and dispose of unserviceable saw blades according to workplace procedures and environmental protection practices
3. Level saw blades	3.1 Assess and match radial, circular and diagonal lumps or ridges on both sides of the saw blade 3.2 Use gauges and straight edges in radial and circular directions and monitor for accuracy 3.3 Remove lumps, ridges or twists progressively using straight edges, hammers and levelling rolls 3.4 Control hammering and rolling patterns to reduce internal blade stresses and avoid spring back and re-occurring defects
4. Tension saw blades	4.1 Assess consistency of required saw blade curvature with a straight edge or tension gauge 4.2 Tension and check saw blade to ensure tension amount, distribution, placement and level follow manufacturer recommendations 4.3 Complete repairs to damaged saw blades and dispose of irreparable saw blades according to environmental protection practices 4.4 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
Numeracy	• Completes precise calculations to correctly level and tension blades • Reads scales on tension gauges to measure results of hammering and/or rolling the blade • Uses standard units of measurement when taking readings from tension gauges
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
FWPSAW3237 Level and tension circular saw blades	FWPSAW3213 Level and tension circular saws	Minor changes; 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 FWPSAW3237 Level and tension circular 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:

- levelled and tensioned circular saw blades for one or both of the following types of saws:
 - circular saw
 - hot saw
- in doing the above job:
 - followed work order and relevant workplace health and safety and environmental protection procedures
 - removed and replaced circular saw blades from the saw
 - assessed circular saw blade conditions in line with standard operating procedures.

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
- purpose, features and operation of saws for which blades are levelled and tensioned:
 - circular saws
 - hot saws
- features and names of different parts of different types of circular saw blades:

- circular crosscut blades
- rip saw blades
- purpose, features and operation of tools and equipment used to level and tension circular saw blades:
 - hammers
 - stretcher rolls
 - levelling rolls
 - heat tensioning instruments
 - gauges and straight edges
- importance of levelling and tensioning circular saw blades to match requirements for:
 - characteristics of various materials sawn
 - speed of the sawing process
 - direction of the sawing process
 - saw blade rim speed
 - saw blade specifications
- methods for:
 - removing saw blades from circular saws
 - assessing saw blade condition
 - levelling and tensioning blades to specified requirements
 - applying curvature
- characteristics of metal used in the circular saw blades, and range of force that can be applied without damaging blades
- workplace procedures specific to levelling and tensioning circular saw blades:
 - workplace health and safety, with particular emphasis on equipment lock-out, the 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 applied to saw technician workshops and timber processing 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 timber processing facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- tools and equipment used to level and tension circular saw blades: hammers, stretcher rolls, levelling rolls, tensioning instruments, gauges and straight edges
- one or both of the following types of circular saws to be repaired or maintained: circular saws, hot saws
- circular saw blades for cutting timber products to be levelled and tensioned: circular crosscut blades, rip saw blades
- PPE suitable for levelling and tensioning circular saw blades
- specifications:
 - document, spreadsheets and proformas for recording processing and equipment faults
 - manufacturer instructions for use, repair and maintenance of equipment
 - work order with specific instructions for levelling and tensioning circular saw blades for specified sawing equipment
 - workplace procedures for levelling and tensioning circular saw blades.

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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