



Australian Government

FWPSAW3208 Sharpen circular saws

Release: 1

FWPSAW3208 Sharpen circular saws

Modification History

Release	Comment
1	Replaces equivalent unit FPISAW3208B Sharpen circular saws, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to assess circular saw blade condition, set up for sharpening and sharpen saw blades with a manually controlled grinder. Work is completed in a forest products factory setting.

The unit applies to Sawdoctor, Saw Repairer, Sawyer.

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

Pre-requisite Unit

Nil

Unit Sector

Sawmilling and Processing

Elements and Performance Criteria

<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Prepare for sharpening	1.1 Review work order and where required check with appropriate personnel. 1.2 Select appropriate repair, maintenance and personal protective equipment and check for operational effectiveness in line with manufacturer's recommendations. 1.3 Plan sharpening process in line with work order and site procedures.
2. Assess condition	2.1 Follow organisational safety procedures throughout all

and set up sharpening equipment	maintenance and repair processes. 2.2 Assess cutting performance of blade and determine need to replace or sharpen. 2.3 Assess prior repairs and condition of teeth, set, and straightness of blade. 2.4 Select sharpening machine with suitable wheel diameter and thickness and change, profile or grind wheel in line with manufacturer's instructions. 2.5 Adjust machine settings to suit required tooth profile geometry, blade set or kerf, blade thickness and diameter to manufacturer's recommendations. 2.6 Set up saw in grinder with appropriate attachments for tooth pitch.
3. Sharpen circular saw blade	3.1 Grind teeth face and gullet to achieve required sharpness and surface finish. 3.2 Maintain tooth profile to industry standards. 3.3 Keep variations in tooth height within industry or manufacturer tolerances for concentricity. 3.4 Control wheel and saw hand feeds to minimise wear, avoid burn marks and maintain smooth surface finish. 3.5 Identify damaged and exhausted circular saw blades and dispose of these in line with organisational procedures and environmental protection practices. 3.6 Identify routine processing and equipment faults and resolve or report to appropriate personnel.

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	• estimate speed at which the abrasive wheel can remove material without affecting steel characteristics when sharpening • measure cutting performance • complete precise calculations to machine teeth to correct • angle • pitch • height • depth.
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Oral communication skills to:	ask open and closed probe questions and actively listen to clarify contents of work orders.
Reading skills to:	- interpret: - workplace health and safety procedures - work orders - manufacturer's instructions and maintenance recommendations.
Writing skills to:	complete basic accurate records of processing and equipment faults.
Planning and organising skills to:	efficiently and logically sequence stages of preparation and repair work using work order to guide activities.
Problem-solving skills to:	- assess blade condition and rectify faults through correct sharpening process - identify and dispose of exhausted and damaged blades - recognise faulty equipment and resolve by reporting or rectifying.
Technology skills to:	- select and use appropriate repair, maintenance and personal protective equipment for sharpening circular saw blades - efficiently and safely sharpen circular saw blades.

Range of Conditions

Not Applicable

Unit Mapping Information

FPISAW3208B Sharpen circular saws

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPSAW3208 Sharpen circular saws

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1	Replaces equivalent unit FPISAW3208B Sharpen circular saws, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format. Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including Required Skills and Knowledge, Evidence Guide and Range Statement

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- follow organisational policies and procedures relevant to sharpening circular saws
- remove and replace circular saw blades from equipment
- sharpen circular saw blades in line with an individual work order for each job
- assess cutting performance as follows:
 - saw performance balanced against achievement of required production time
 - degree of deviation in the range of sawn products
- assess the condition of blade teeth for:
 - sharpness of tooth cutting edges
 - angles within the tooth profile
 - tooth strength
 - damage to teeth
 - pitch
 - depth
 - number of teeth per metre
- operate the abrasive wheel at appropriate speed to remove material without affecting steel characteristics
- produce a quality of surface texture left by the abrasive wheel along the entire profile and at the intersection of all cutting edge angles.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- purpose, features and operation of circular saws for which blades are sharpened
- features and names of different parts of circular saw blades
- purpose, features and operation of tools and equipment used to sharpen circular saw blades:
 - gulleting and grinding machines
 - abrasive wheels
- importance of sharpening and setting teeth and tension to match requirements for:
 - characteristics of various materials sawn
 - speed of the sawing process
 - direction of the sawing process
 - cutting angle for sawing
 - saw blade specifications
- methods for:
 - removing saw blades from circular saws
 - assessing saw blade condition
 - sharpening blades to specified requirements
 - setting teeth to a specified profile
 - setting concentricity of teeth
- tooth pitch and tooth angles at which blades are sharpened (blade geometry)
- range of speeds at which abrasive wheels can be operated without damaging blades
- organisational policies and procedures specific to sharpening circular saw blades:
 - workplace health and safety with particular emphasis on equipment lock out and use of personal protective equipment
 - communication reporting lines
 - recording and reporting processing and equipment faults
- environmental protection practices for repairing and maintaining tools and equipment in forest products factory settings:
 - reducing water and energy use
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing materials

Assessment Conditions

The following resources must be made available:

- tools and equipment used to sharpen circular saw blades:
 - gulleting and grinding machines
 - machine attachments
 - hand-held tools

- abrasive wheels
- circular saws for which blades are to be sharpened
- one or more of the following types of circular saw blades to be sharpened:
 - circular cross cut blades used for cutting timber products
 - rip saw blades used for cutting timber products
- personal protective equipment suitable for sharpening circular saw blades
- manufacturers' instructions for use, repair and maintenance of equipment
- work order for repair and maintenance activities with specific instructions for sharpening circular saw blades in specified equipment
- template documents for recording processing and equipment faults
- relevant personnel for the purposes of communicating information
- organisational policies and procedures for sharpening circular saw blades.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.
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