



**Australian Government**

# **FWPSAW3214 Join band saw blades**

**Release: 2**

# FWPSAW3214 Join band saw blades

## Modification History

| Release   | Comments                                                                              |
|-----------|---------------------------------------------------------------------------------------|
| Release 2 | This version released with FWP Forest and Wood Products Training Package Version 3.0. |
| Release 1 | This version released with FWP Forest and Wood Products Training Package Version 2.0. |

## Application

This unit of competency describes the outcomes required to assess the condition of band saw blades, to prepare and weld meeting ends and to finish the welded surface ready for operation. Work is completed in a forest products factory setting.

The unit applies to Sawdoctor, Saw Repairer.

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

| Element                                          | 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 joining                           | 1.1 Review work order and where required check with appropriate personnel.<br><br>1.2 Select appropriate repair, maintenance and personal protective equipment and check for operational effectiveness in line with manufacturer's recommendations. |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | <p>1.3 Remove band saw blades from machinery.</p> <p>1.4 Plan joining process in line with work order.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2. Join or repair band saw blade | <p>2.1 Follow organisational safety procedures throughout all maintenance and repair processes.</p> <p>2.2 Obtain saw blank and cut to length or cut existing blade at weld defect.</p> <p>2.3 Trim ends to obtain correct back alignment and pitch and/or shape to assist metal penetration.</p> <p>2.4 Set up ends to specified tolerances in welder.</p> <p>2.5 Apply weld to ensure metal penetrates through blade thickness and protect from accidental contact.</p> <p>2.6 Grind surplus weld material from blade without burning or annealing metal.</p> <p>2.7 Finish blade to eliminate bumps in blade surface.</p> <p>2.8 Identify damaged blades or those with or sub-standard joins and dispose of these in line with environmental protection practices.</p> <p>2.9 Package band saw for protection during return to service.</p> <p>2.10 Identify routine processing and equipment faults and resolve or report to appropriate personnel.</p> |

## Foundation Skills

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

|                               |                                                                                                                                                                                                                                                                                    |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Learning skills to:           | <ul style="list-style-type: none"> <li>complete precise calculations to:             <ul style="list-style-type: none"> <li>cut blanks to correct length</li> <li>determine required tolerances.</li> </ul> </li> </ul>                                                            |
| Oral communication skills to: | <ul style="list-style-type: none"> <li>ask open and closed probe questions and actively listen to clarify contents of work order.</li> </ul>                                                                                                                                       |
| Reading skills to:            | <ul style="list-style-type: none"> <li>interpret of documents:             <ul style="list-style-type: none"> <li>workplace health and safety and other organisational procedures</li> <li>work orders</li> <li>manufacturers' maintenance recommendations.</li> </ul> </li> </ul> |
| Writing skills to:            | <ul style="list-style-type: none"> <li>complete accurate basic records for processing and equipment faults.</li> </ul>                                                                                                                                                             |

|                                    |                                                                                                                                                                                                                                                                          |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Planning and organising skills to: | <ul style="list-style-type: none"><li>efficiently and logically sequence stages of preparation and repair work using work order to guide activities.</li></ul>                                                                                                           |
| Problem-solving skills to:         | <ul style="list-style-type: none"><li>assess condition of welds and rectify faults through correct welding process</li><li>identify and dispose of unserviceable and damaged blades</li><li>recognise faulty equipment and resolve by reporting or rectifying.</li></ul> |
| Technology skills to:              | <ul style="list-style-type: none"><li>select and use appropriate repair, maintenance and personal protective equipment for joining saw blades</li><li>efficiently and safely weld saw blades.</li></ul>                                                                  |

## Unit Mapping Information

| Code and title current version            | Code and title previous version           | Comments                              | Equivalence status |
|-------------------------------------------|-------------------------------------------|---------------------------------------|--------------------|
| FWPSAW3214 Join band saw blades Release 2 | FWPSAW3214 Join band saw blades Release 1 | Minor typographical errors corrected. | Equivalent unit    |

## 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 FWPSAW3214 Join band saw blades

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## 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 join band saw blades
- join band saw blades in line with a work order and within prescribed organisational requirements
- complete these processes:
- remove saw blades from band saws
- weld blades to specified requirements
- grind surplus weld material
- remove all distortions from the blade surface
- tension the weld zone
- adjust back length of the blade
- clean welded zone.

## Knowledge Evidence

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

- purpose, features and operation of band saws
- features and names of different parts of band saw blades
- purpose, features and operation of tools and equipment used to join band saw blades:
  - band saw welding equipment
  - grinding and finishing equipment
- importance of joining blades to suit machine design requirements
- weld defects and effects on blade operation

- methods for:
  - removing saw blades from band saws
  - welding blades to specified requirements
  - grinding surplus weld material
  - removing all distortions from the blade surface
- organisational policies and procedures specific to joining band 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 join band saw blades including:
  - band saw welding equipment
  - Gas Metal Arc Welding (GMAW)
  - Gas Tungsten Arc Welding (GTAW)
  - Manual Metal Arc Welding (MMAW)
  - oxyacetylene equipment
  - grinding and finishing equipment
  - hand or power operated tools
- band saws for which blades are to be joined
- saw blades:
  - narrow and wide band saw blades that cut both ferrous and non-ferrous material
  - frame (gangsaw) blades
- personal protective equipment suitable for joining band saw blades
- manufacturers' instructions for use, repair and maintenance of equipment
- work order for repair and maintenance activities with specific instructions for joining band saw blades for specified equipment
- documents, spreadsheets and commonly used proformas for recording processing and equipment faults
- organisational policies and procedures for joining band 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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