



Australian Government

FWPSAW3219 Replace stellite tips

Release: 1

FWPSAW3219 Replace stellite tips

Modification History

Release	Comment
1	Replaces equivalent unit FPISAW3219B Replace stellite tips, 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 remove worn stellite tips from saw blades and to weld, anneal, clean and prepare replacement tips for grinding and return to service. 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

<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 replacement	1.1 Review work order and where required check with appropriate personnel. 1.2 Select appropriate repair, maintenance and personal protective equipment and check operational effectiveness in line with manufacturer's recommendations. 1.3 Plan replacement process in line with work order.
2. Prepare tips	2.1 Follow organisational safety procedures throughout all maintenance

	and repair processes. 2.2 Clean saw of foreign matter and check for defects. 2.3 Measure tips requiring replacement and compare, check and mark against tolerances. 2.4 Clean saw and tip surfaces to provide good contact surface for brazing or silver soldering.
3. Replace tips	3.1 Set up saw in brazing jig in line with manufacturer's instructions. 3.2 Select brazing material and suitable technique for application and heat control. 3.3 Check tolerances, select replacement tip to meet application specifications and weld into position. 3.4 Trial weld one tip and adjust to confirm weld pressure, current temperature and annealing settings against specifications. 3.5 Segregate and dispose of tips with sub-standard welds in line with environmental protection practices. 3.6 Set manual or automatic feeds in line with number of tips to be welded. 3.7 Complete tip replacement regularly, checking and adjusting annealing process and temperatures to ensure specified range. 3.8 Repair damaged tips and dispose of irreparable tips in line with environmental protection requirements. 3.9 Remove surplus brazing material from saw surfaces and check tip tolerances against specifications. 3.10 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:	- complete routine calculations to: - measure amounts of brazing materials - select temperatures for annealing process - estimate tolerances.
Oral communication skills to:	- ask open and close probe questions and actively listen to clarify contents of work order - make accurate verbal reports on processing and equipment faults.

Reading skills to:	• interpret: • workplace health and safety procedures • work orders • manufacturers' maintenance recommendations.
Writing skills to:	• complete accurate basic records for 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 tip condition and rectify faults through correct welding process • identify and dispose of tips with sub-standard welds • recognise faulty equipment and resolve by reporting or rectifying.
Technology skills to:	• select and use appropriate repair, maintenance and personal protective equipment for welding stellite tips • efficiently and safely replace stellite tips.

Range of Conditions

Not Applicable

Unit Mapping Information

FPISAW3219B Replace stellite tips

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 FWPSAW3219 Replace stellite tips

Modification History

Release	Comment
1	Replaces equivalent unit FPISAW3219B Replace stellite tips, 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 replacing stellite tips
- replace stellite tips in line with the work order and within prescribed organisational requirements
- remove and replace stellite tips from equipment including:
 - braze new stellite tips onto the tooth face or tooth seat
 - replace tips that are broken, missing or worn out
 - rebuild broken or damaged tips
- remove and assess condition of stellite tips in line with standard operating procedures

Knowledge Evidence

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

- purpose, features and operation of saws for which stellite tips are replaced:
 - band saws
 - circular saws
 - gang saws
- features and names of different parts of saw blades
- purpose, features and operation of tools and equipment used to replace stellite tips:
 - automatic or semi-automatic tipping machines
 - brazing equipment and brazing material

- brazing jigs
- methods for:
 - removing saw blades from sawing equipment
 - assessing saw blade condition
 - removing stellite tips from saw blades
 - brazing new stellite tips onto the tooth face or gullet
- annealing processes and temperatures for stellite tips and saw blades
- appropriate tolerances for weld deposits and replacement tip sizes
- characteristics of metal used in saw blades and effects of brazing
- organisational policies and procedures specific to replacing stellite tips:
 - 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 replace stellite tips:
 - automatic or semi-automatic tipping machines
 - brazing equipment
 - brazing jigs
- one or more of the following types of saws to be repaired and maintained:
 - band saws
 - circular saws
 - gang saws
- stellite tips
- brazing material:
 - stellite rod
 - silver brazing rod
 - shim or ribbon
 - brazing flux
- personal protective equipment suitable for replacing stellite tips
- manufacturers' instructions for use, repair and maintenance of equipment
- work order for repair and maintenance activities with specific instructions for replacing stellite tips in specified equipment

- documents, spreadsheets and commonly used proformas for recording processing and equipment faults
- relevant personnel for the purposes of communicating information
- organisational policies and procedures for replacing stellite tips.

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.

Links

Companion Volume implementation guides are found in VETNet -

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