Modification history

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| Release | Comments |
| Release 1 | This version released with FWP Forest and Wood Products Training Package Version 5.0. |

| FWPSAW3XXX | Level and tension circular saw blades |
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| 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 occupational licensing, legislative or certification requirements apply to this unit at the time of publication. |
| Prerequisite Unit | Nil |
| Unit Sector | Sawmilling and Processing |

| Elements | Performance Criteria |
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| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Prepare for repair | 1.1 Review work order to determine job requirements and where required seek clarification from appropriate personnel  1.2 Identify and apply workplace health and safety requirements including the use of personal protective equipment, equipment lockout and safe manual handling techniques  1.3 Identify, assess and take actions to mitigate risks and hazards associated with levelling and tensioning circular saws  1.4 Identify and implement workplace procedures for minimising waste material 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 straightedges, 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. | |
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| Skill | Description |
| Numeracy | * Complete precise calculations to correctly level and tension blades * Read scales on tension gauges to measure results of hammering and/or rolling the blade * Use standard units of measurement when taking readings from tension gauges |
| Navigate the world of work | * Identify main tasks, responsibilities and boundaries of own role |
| Interact with others | * Use modes of communication suitable to purpose to confirm and clarify understanding |
| Get the work done | * Recognise and respond to routine problems |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| FWPSAW3XXX Level and tension circular saw blades Release 1 | FWPSAW3213 Level and tension circular saws  Release 2 | Minor changes; updated unit code and title for clarity and compliance. | Equivalent |

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

| TITLE | Assessment requirements for FWPSAW3XXX Level and tension circular saw blades |
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| Performance Evidence | |
| An individual demonstrating competency must satisfy all the elements and performance criteria in this unit. There must be evidence that, on at least one occasion, the individual has:   * levelled and tension circular saw blades for one or both of the following types of saws: * circular saw * hot saw * in doing the above job, the individual has: * applied workplace procedures relevant to level and tension circular saw blades * levelled and tensioned circular saw blades according to a work order and workplace requirements * removed and replaced circular saws blades from the saw * assessed circular saw blade conditions in line with standard operating procedures. | |

| Knowledge Evidence |
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| 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 which 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 lockout, the use of personal protective equipment (PPE) and safe manual handling techniques * communication reporting lines * recording and reporting 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 |
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| Assessment of the skills in this unit of competency must take place under the following conditions:   * physical conditions: * skills must be demonstrated in a saw technician workshop, 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. |

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