



Australian Government

Department of Education, Employment and Workplace Relations

FPISAW3227B Select and saw logs in multi-species operations

Release: 1

FPISAW3227B Select and saw logs in multi-species operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to select and prepare multi-species logs for sawing, to set up the processing of logs and to maintain the production flow

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3227A Select and saw logs in multi-species operations

Application of the Unit

Application of the unit

The unit involves selecting and sawing logs in multi-species operations in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select log and prepare for sawing	1.1. Applicable Occupational Health and Safety (OHS), environmental, legislative and organisational requirements relevant to selecting and sawing logs in multi-species operations are identified and followed 1.2. Work order is reviewed and checked with appropriate personnel 1.3. Appropriate logs are selected by species and size or grade, and billeted to suit work order 1.4. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.5. Log is selected with reference to production and log utilisation requirements 1.6. Logs with features which are not suitable are segregated or rejected and disposed of in line with site procedures 1.7. Communication with others is established and maintained in line with OHS requirements
2. Break down logs	2.1. Pre start-up checks are carried out on equipment in line with site requirements 2.2. Sawing or selection process is planned in line with site procedures, environmental requirements and to optimise volume and quality of recovery 2.3. Log is held with dogs, minimising damage and aligning with saw/s 2.4. Logs or flitches are cleared of foreign matter and fed into the saw at the feed rate prescribed by organisational requirements 2.5. Sawing sequence is planned, maintained and adjusted to produce the required quantity of flitches or cants and to maximise the feed rate 2.6. Break down process is regularly checked and adjusted to maintain the desired quality and output 2.7. Break down processes are adjusted to allow for changes in species, revealing of features, or unacceptable characteristics 2.8. Break down process and equipment faults are recorded and reported to the appropriate personnel 2.9. Flitches or cants are safely directed in line with flow

ELEMENT	PERFORMANCE CRITERIA
	control
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures 3.2. Saw blades are checked for blunt or damaged condition 3.3. Blunt or damaged saws are identified and <i>dealt with</i> in line with site procedures, manufacturer's recommendations and environmental requirements 3.4. Machine area is kept clear of residue and debris and maintained as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; identify species and strength groups of logs; identify recovery potential of raw resource (logs); efficiently and safely saw logs in multi-species operations
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures; accurately identify blunt or damaged saws in multi-species operations

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for selecting and sawing logs in multi-species operations
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for selecting and sawing logs in multi-species operations
- Environmental risks and hazards

REQUIRED SKILLS AND KNOWLEDGE

- Log sawing systems and machine capabilities
- Species and recovery characteristics of timber and timber defects
- Cutting pattern requirements, feed rates and finish
- Blade condition assessment
- Flow control systems and marking requirements
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently saw logs in multi-species operations within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to selecting and sawing logs in multi-species operations
 - following organisational policies and procedures relevant to selecting and sawing logs in multi-species operations
 - selecting logs in line with production requirements and log utilisation
 - selecting and sawing logs in multi-species operations to produce flitches in line with the work order and within prescribed organisational specifications
 - conducting operator maintenance on saw machinery
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

RANGE STATEMENT

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

RANGE STATEMENT

- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Selection may include:

- species
- size
- length
- quality
- shape
- sweep
- spiral grain
- pipe
- heart line
- strength group
- defects
- characteristics
- durability
- borer resistance

Sawing

- is the process of cutting a log into parts including flitches, cants and off-cuts

Multi-species logs are to include: assessment of:

- diameter range
- curvature
- faults
- softwood species of various types
- moisture content

Work order is to include:

- instructions for the selecting and sawing of logs and despatching of flitches or cants from the work site to down-stream processing

and may include:

- treating
- species
- diameter
- length

RANGE STATEMENT

- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment includes:

- loaders
- forklifts
- chainsaws
- other yarding equipment utilised in log selection and conversion

and may include:

- circular saws
- bench saws
- overhead frame saws or band saws (single, twin, single edges and twin edges)
- mechanical feed
- conveyors
- standard two-five headed dog carriages
- flat top carriages with head rigs

and is to include:

- procedures for machine lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Features** may include:
- defects arising from a change in moisture content
 - curvature
 - spiral grain
 - shakes
 - insect defects
 - knots and resin pockets
 - sweep
 - taper
 - end splits and shape

RANGE STATEMENT

	• heart shakes • heart crack-decay
Disposing of may include:	• recycling timber with unsuitable features • re-using timber with unsuitable features
Communication may include:	• verbal and non-verbal language • constructive feedback • active listening • questioning to clarify and confirm understanding • use of positive, confident and cooperative language • use of language and concepts appropriate to individual social and cultural differences • control of tone of voice • body language
Pre start-up checks	are conducted to ensure: • saw has been set-up correctly • blades are installed accurately • machinery is operating to optimum performance
Optimising includes:	• planning the cutting of a log to achieve the most from it • ensuring environmental requirements are central to this planning process
Dogs	• are the carriage devices which secure logs during break down
Flitch	• is a large piece of sawn log intended for further cutting that is sawn on at least two surfaces
Feed rate is to include:	• rate of speed the material is passed through the saw/s, allowing for the type of saw blades, power source, log species, depth of cut and log quality affecting the sharpness of the blades • finish of the material • production output
Cant	is a thick piece of timber with two or more surfaces sawn from a log and intended for further sawing
Break down	is the process of sawing a log into its parts as

RANGE STATEMENT

specified by the work order and the characteristics of the log

Characteristics may include:

- gum veins
- over growths
- knots
- resin pockets

Records and reports may include:

- the sawing procedures
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Dealing with may include:

- repair of damaged saws and blunt or damaged saw blades
- disposing of saws and saw blades that cannot be repaired

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing