

Title	Demonstrate knowledge of saws and knives used in wood manufacturing		
Level	2	Credits	6

Purpose	People credited with this unit standard are able to, for wood manufacturing: demonstrate knowledge of saw design; describe problems associated with operating and maintaining saws used; demonstrate knowledge of handling and storage of saw blades used; and demonstrate knowledge of operating and maintaining knives used.
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Classification	Wood Manufacturing - Generic Skills > Wood Manufacturing Foundation Skills
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Available grade	Achieved
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Guidance Information

1 Definitions

Accepted industry practice refers to approved codes of practice and standardised procedures accepted by the wider wood manufacturing industry as examples of best practice.

Workplace procedures refer to documented policies and procedures set by the organisation carrying out the work, and to documented or other directions provided to staff, and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor’s instructions, and procedures to comply with legislative and local body requirements relevant to the wood manufacturing sector.

2 Assessment information

All activities and evidence must meet workplace procedures and accepted industry practice.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of saw design for wood manufacturing.

Performance criteria

- 1.1 Types of saw blades are identified and their uses within the sawmill process are explained.
- 1.2 Saw features are described in terms of their effect on cutting quality.
- Range hook angle, sharpness, back clearance angle, tooth pitch, gullet size, tangential clearance angle, radial clearance angle, side clearance, kerf.
- 1.3 Influences of tooth design on sawdust removal and cut finish are explained.
- Range ripping, cross cutting.
- 1.4 Saw tip types are described, and these are matched to sawing applications.
- 1.5 The purpose of levelling, tensioning of saw blades, and back crowning of bandsaws are described.

Outcome 2

Describe problems associated with operating and maintaining saws used in wood manufacturing.

Performance criteria

- 2.1 Problems caused by underfeeding a saw centre are described.
- Range evidence is required of three problems.
- 2.2 Problems caused by overfeeding a saw centre are described.
- Range evidence is required of three problems.
- 2.3 Daily maintenance requirements for a bandsaw are described.
- Range may include but is not limited to –
inspection of – guides, scrapers, shear plate.
checks on – strain, tracking and lubrication.
- 2.4 Daily maintenance requirements for a circular saw are described.
- Range may include but is not limited to – inspection of guides and
lubrication checks.
- 2.5 The effects of operating time on saw performance in relation to quality and performance are explained.
- Range effects – product quality, time in saw shop, saw blade life.

Outcome 3

Demonstrate knowledge of handling and storage of saw blades used in wood manufacturing.

Performance criteria

- 3.1 Methods used to detect defects in saws blades are described.
Range visual and audible checks.
- 3.2 The handling and storage of saw blades to maintain personal safety and condition of the saw teeth is described.

Outcome 4

Demonstrate knowledge of operating and maintaining knives used in wood manufacturing.

Performance criteria

- 4.1 Types of knives used in wood manufacturing are identified and their purpose explained.
Range types – chipper, slabber, planer, lathe.
- 4.2 The effects of knife features on product quality are described.
Range features may include but are not limited to – knife cutting angle, position, anvil and knife alignment, knife height, bevel, honing, babitts, knife sets.
- 4.3 Operating practices that have a negative effect on the life of knives, and product quality are described.
Range evidence is required of practices for one knife type.

Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 December 2006	N/A
Review	2	28 May 2020	N/A

Consent and Moderation Requirements (CMR) reference	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.