Title	**Demonstrate basic chainsaw operation in a non-forestry production environment**		
Level	**2**	**Credits**	**10**

Purpose	This unit standard is intended for those new to the forestry industry and chainsaw users in industries other than commercial forestry. This unit standard is designed as an introduction to chainsaw use. People credited with this unit standard are able to: demonstrate knowledge of the rules for chainsaw use; disassemble and reassemble a chainsaw, identify its components and explain their functions; demonstrate knowledge of factors that influence the operation of a chainsaw; prepare to operate a chainsaw; start and test a chainsaw; and use a chainsaw to make cuts.

Classification	Forestry > Non Commercial Forestry Skills

Available grade	Achieved

Guidance Information

1 This unit standard is intended for chainsaw users in industries other than commercial forestry. Chainsaw users within a commercial forestry operation should consider Unit 23411, *Operate a chainsaw and carry out basic chainsaw maintenance in a commercial forestry situation*.

2 Reference
WorkSafe NZ, *A Guide to Safety with Chainsaws* (Wellington, 2011), and any subsequent amendments, available at https://worksafe.govt.nz/dmsdocument/203-a-guide-to-safety-with-chainsaws.

3 Definitions
Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider forestry industry as examples of best practice.
PPE – personal protective equipment as required for the task in accordance with accepted industry practice and worksite procedures. This may include but is not limited to high-visibility clothing, protective clothing, gloves, face and eye protection, safety helmet, approved footwear, chaps, hearing protection, and safety devices.

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Worksite procedures refer to documented procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site safety procedures, equipment operating procedures, quality assurance procedures, housekeeping standards, procedures to comply with legislative and local body requirements.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the rules for chainsaw use.

Performance criteria

1.1 The rules relating to chainsaw safety features are identified in accordance with accepted industry practice.

1.2 The rules for tensioning, sharpening, and setting of depth gauges of chainsaw chains are described in accordance with accepted industry practice.

1.3 The rules relating to the transport and use of chainsaw fuel are described in accordance with accepted industry practice.

1.4 The rules relating to starting chainsaws are described in accordance with accepted industry practice.

1.5 The rules relating to the condition of a chainsaw, which would preclude its use, are described in accordance with accepted industry practice.

1.6 The recommendation relating to testing the operation of the chain brake is described in accordance with accepted industry practice.

1.7 The recommendation relating to the use of a chainsaw above shoulder height is described in accordance with accepted industry practice.

1.8 The rules relating to the maintenance of a chainsaw with the motor running are described in accordance with accepted industry practice.

1.9 The rules relating to the operation of a chainsaw on stockpiled, stacked, or heaped logs are described in accordance with accepted industry practice.

1.10 The requirement to check the security and condition of anti-vibration mounts on a chainsaw are described in accordance with accepted industry practice.

Outcome 2

Disassemble and reassemble a chainsaw, identify its components, and explain their functions.

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Performance criteria

2.1 Safety features are identified, and their functions explained in accordance with accepted industry practice.

Range on/off switch, throttle lockout, chain brake, rear hand-guard, spark arrester/muffler, anti-vibration mounts, chain catcher, mitt.

2.2 Chainsaw starter cover/assembly, top cover, air filter, side cover, bar and chain are removed in accordance with chainsaw manufacturer's recommendations.

2.3 Chainsaw components are identified, and their functions are explained in accordance with accepted industry practice.

Range starter mechanism, flywheel, top cover, air filter, carburettor, high-tension lead, spark plug, cooling fins, choke, throttle control, side cover, drive sprocket, chain tension adjuster, clutch, guide bar, oil flow adjuster, depth gauge, cutter, decompression button.

2.4 Chainsaw is reassembled to safe working condition in accordance with chainsaw manufacturer's recommendations.

Outcome 3

Demonstrate knowledge of factors that influence the operation of a chainsaw.

Performance criteria

3.1 The risks specific to the operation of a chainsaw are identified, and methods to control them are explained in accordance with accepted industry practice.

Range evidence of four risks and a control method for each is required.

3.2 Reactive forces of a chainsaw are described in accordance with accepted industry practice.

Range traction, recoil.

3.3 Chain maintenance requirements that ensure chain operates at optimum effectiveness are identified and described in accordance with accepted industry practice.

Range evidence of three chain maintenance requirements is required.

3.4 Features of correctly sharpened chain teeth are explained in accordance with accepted industry practice.

Range cutter length, cutter angle, depth gauge height.

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3.5 Cutter profiles are identified and compared in terms of use and cutting speed in accordance with accepted industry practice.

Range chisel, semi-chisel.

3.6 The consequences of operating a chainsaw with a poorly maintained chain are explained in terms of the main effect on cutting, maintenance, operator health and operator safety in accordance with accepted industry practice.

3.7 Kickback and its causes while operating a chainsaw are explained in accordance with accepted industry practice.

Range two causes of kickback.

3.8 Ways to control kickback through correct chainsaw use are explained in accordance with accepted industry practice.

Range grip, left thumb, body position, bar nose location, re-entering cuts, reach.

3.9 The terms *tension wood* and *compression wood* are defined in accordance with accepted industry practice.

Outcome 4

Prepare to operate a chainsaw.

Performance criteria

4.1 PPE is selected, adjusted, and worn in accordance with accepted industry practice.

Range leg, head, foot, hearing and eye protection; high-visibility clothing (as required).

4.2 First aid requirements are in accordance with accepted industry practice.

Range availability of first aid kit, operator wound dressings.

4.3 The chainsaw is refuelled in accordance with accepted industry practice.

4.4 Pre-start checks are carried out to ensure effective and safe operation of the chainsaw in accordance with accepted industry practice.

Range fuel and oil, cutting unit, security of external fittings, condition of safety features.

4.5 The motor size and bar length meet the requirements for the work to be undertaken in accordance with accepted industry practice.

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4.6 The safe method of carrying a chainsaw is demonstrated in accordance with accepted industry practice.

Range left side of body, bar pointing to rear, saw able to be thrown clear in a fall.

4.7 Basic sharpening technique is demonstrated in accordance with accepted industry practice.

Outcome 5

Start and test a chainsaw.

Performance criteria

5.1 Starting location is checked for safety in accordance with accepted industry practice.

5.2 Approved starting methods are used in accordance with the manufacturer's recommendations and accepted industry practice.

5.3 Chainsaw is held in accordance with accepted industry practice.

Range left hand on front handle, right hand on rear handle, fingers and thumbs encircling the handles.

5.4 Chainsaw is checked for operating condition in accordance with accepted industry practice.

Range idles evenly, idles without chain movement, chain lubrication system is working, chain brake is tested.

Outcome 6

Use a chainsaw to make cuts.

Performance criteria

6.1 Material to be cut is stabilised or likely movement anticipated, and body position adjusted accordingly in accordance with accepted industry practice.

6.2 Footing is stable and working position is balanced in accordance with accepted industry practice.

Range not overreaching, held close to the body, out of kickback zone, braced against reactive forces, standing in safe position.

6.3 Basic cuts are planned and carried out in accordance with accepted industry practice.

Range cuts – five each of up cuts, down cuts.

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6.4 Compression wood and tension wood are identified, and cuts are planned and carried out in accordance with accepted industry practice.

Range cuts – two cuts with compression wood and two cuts with tension wood.

6.5 Chainsaw is stopped after cutting is completed and placed in a safe position to ensure it is not a hazard in accordance with accepted industry practice.

6.6 Chain is checked during operation for sharpness, tension and lubrication in accordance with accepted industry practice.

Planned review date	31 December 2028

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	8 November 1996	31 December 2011
Revision	2	19 June 1998	31 December 2011
Review	3	5 December 2000	31 December 2011
Review	4	22 May 2008	31 December 2011
Revision	5	22 August 2008	31 December 2011
Revision	6	12 December 2008	31 December 2012
Review	7	19 November 2010	31 December 2016
Review	8	19 March 2015	31 December 2024
Review	9	26 March 2020	30 December 2025
Review	10	28 March 2024	N/A

Consent and Moderation Requirements (CMR) reference	0173

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact Muka Tangata - People, Food and Fibre Workforce Development Council qualifications@mukatangata.nz if you wish to suggest changes to the content of this unit standard.

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