

Title	Prepare wire ropes, rigging, and equipment for cable harvesting operations		
Level	4	Credits	10

Purpose	<p>This unit standard is intended for people employed in a cable harvesting operation.</p> <p>People credited with this unit standard are able to: explain terms associated with wire ropes, rigging, and equipment on cable yarders; demonstrate knowledge of cable harvesting blocks; demonstrate knowledge of wire ropes and their applications and use in cable harvesting operations; demonstrate knowledge of rigging for cable harvesting operations; check and prepare wire ropes, rigging, and equipment for use in cable harvesting operations and explain the procedures for replacing wire ropes on a cable yarder.</p>
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Classification	Forestry > Forest Harvesting Operations
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes the Health and Safety at Work (HSW) Act 2015; the Resource Management (National Environmental Standards for Plantation Forestry) Amendment Regulations 2018; and any subsequent amendments.
- 2 References
Approved Code of Practice (ACOP) for Safety and Health in Forestry Operations, December 2012, available from <https://worksafe.govt.nz/>.
 New Zealand Forest Owners Association, *Forest Practice Guides* (2019), and any subsequent amendments, available from <https://www.nzfoa.org.nz>.
- 3 Definitions
Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider forestry industry as examples of best practice.
Strawline refers to a light cable used to haul heavier cables during the setup of a cable harvesting operation, and may be wire, or synthetic, or an accepted alternative material.

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

Explain terms associated with wire ropes, rigging, and equipment on cable yarders.

Performance criteria

1.1 Terms associated with wire ropes, rigging, and equipment on cable yarders are explained in accordance with accepted industry practice.

Range fleet angle, equalising block, skyline deflection, shock loading, butt rigging, wrapping, tight-lining, pressed ferrule, wedged ferrule, strawline hook, Safe Working Load (SWL).

Outcome 2

Demonstrate knowledge of cable harvesting blocks.

Performance criteria

2.1 Key parts of cable harvesting blocks are identified and their functions are explained in accordance with accepted industry practice.

Range shackle, yoke, sheave, cheek plate, hinge, gate pins, line guards, bearings or bushes; evidence from one block is required.

2.2 Maintenance requirements of cable harvesting blocks are explained in accordance with accepted industry practice.

Range maintenance requirements include – hinges, gates, yokes, pins, cheek plates, sheaves, bearings, lubrication.

2.3 Factors that cause wear or damage to cable harvesting blocks are explained in accordance with accepted industry practice.

Range rope size, physical damage, alignment, binding, lack of maintenance, contamination, overloading.

Outcome 3

Demonstrate knowledge of wire ropes and their applications and use in cable harvesting operations.

Performance criteria

3.1 Types of wire ropes used in cable harvesting are described in terms of rope construction in accordance with accepted industry practice.

Range 6x19, 6x26, 6x31, swaged, regular.

3.2 Applications for different types of wire rope are explained in terms of diameter, construction, and Safe Working Load.

Range may include – skyline, mainline, tailrope, tagline or slackline, strawline, guyline, strops, dropline; evidence of six is required.

3.3 Factors causing damage or accelerated wear to wire rope are explained in accordance with accepted industry practice.

Range corrosion, crushing, sheave size, drum size, corrugated sheaves, shock loading, wire rope size and construction, splicing, bending, rope out of lead, binds.

3.4 The abrasion effects on a wire rope are explained in accordance with accepted industry practice.

3.5 Measures that can be taken to minimise damage or wear to wire rope are described in accordance with accepted industry practice.

3.6 The factors to be considered when selecting wire rope for a cable harvesting operation is explained in accordance with worksite procedures and accepted industry practice.

3.7 Splice types suitable for use on mainline, skyline, and tail ropes are identified in accordance with accepted industry practice.

3.8 The worksite procedure for splicing ropes is explained.

Outcome 4

Demonstrate knowledge of rigging for cable harvesting operations.

Performance criteria

4.1 Types of rigging used in a specific cable harvesting operation are described in accordance with accepted industry practice.

Range one of – carriage, butt rigging, grapple.

4.2 Rigging components are identified and checked for safety and serviceability in accordance with the manufacturers' requirements.

Range includes but is not limited to – lugs, McGoverns, sheaves, grapple, swivels, shackles, spreader, butt hooks, chain or wire rope.

4.3 Harvesting conditions suitable for varying strop diameters, lengths, and numbers are explained in terms of worksite procedures.

Outcome 5

Check and prepare wire ropes, rigging, and equipment for use in cable harvesting operations.

Performance criteria

- 5.1 The risks specific to preparing wire ropes, rigging, and equipment for cable harvesting operations are assessed and controlled in accordance with accepted industry practice.
- 5.2 Wire ropes are checked for wear and damage, and defects are reported, in accordance with worksite procedures.
- 5.3 Rigging is assembled in accordance with worksite procedures and accepted industry practice.
- 5.4 Rigging and equipment components are checked and lubricated prior to use in accordance with worksite procedures.
- 5.5 Wire ropes and sheaves are matched for compatibility and variations reported in accordance with worksite procedures.
- 5.6 A shackle is fitted to an eye in a wire rope in accordance with accepted industry practice.
- 5.7 Strops of a specified diameter and length are prepared and attached to meet worksite procedures.

Outcome 6

Explain the procedures for replacing wire ropes on a cable yarder.

Performance criteria

- 6.1 The procedure for removing a wire rope from a cable yarder is explained in accordance with worksite procedures and accepted industry practice.
- 6.2 The procedure for spooling new wire rope onto a drum is explained in accordance with worksite procedures and accepted industry practice.

Planned review date	31 December 2028
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 January 1995	31 December 2012
Review	2	8 November 1996	31 December 2012
Revision	3	19 June 1998	31 December 2012
Review	4	5 December 2000	31 December 2012
Review	5	22 May 2008	31 December 2012
Review	6	8 December 2011	31 December 2017
Review	7	10 December 2015	N/A
Review	8	23 January 2020	N/A
Rollover	9	26 April 2024	N/A

Consent and Moderation Requirements (CMR) reference	0173
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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 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.