



Australian Government

Department of Education, Employment and Workplace Relations

FPIHAR3211B Operate yarder

Release: 1

FPIHAR3211B Operate yarder

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to set up and operate the yarder, inspect and modify rigging, pull logs from the cutting area to the landing, and to control speed, braking, drums, positioning of chokers and manoeuvring of obstacles

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3211B Operate yarder

Application of the Unit

Application of the unit

The unit involves operating a yarder in a forest or farm forest environment

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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for yarder operations	1.1. Applicable Occupational Health and Safety (OHS), environmental, legislative and organisational requirements relevant to operating a yarder are identified and followed 1.2. Work order is reviewed and checked with appropriate personnel 1.3. Type and quantity of logs to be extracted is identified and assessed for safe working conditions and environmental protection measures 1.4. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.5. Yarder and cable operation activities are planned in line with site procedures 1.6. Communication with others is established and maintained in line with OHS requirements
2. Set up yarder	2.1. Yarder is moved to the landing in line with the logging code of practice 2.2. Yarder is positioned on landing in line with planned system design and stable, level support base is ensured for outriggers 2.3. Tower or spar is inspected, rigged to suit system design and raised in line with manufacturer's recommendations and the logging code of practice 2.4. Line shifts are conducted with other personnel and yarder is operated to provide required line slack and tension to facilitate movements
3. Inspect and maintain cable systems	3.1. System components are observed during normal operations, faults noted and corrective action taken 3.2. System components are routinely inspected, maintained, repaired or replaced in line with the logging code of practice 3.3. Guylines are routinely inspected and tension adjusted to equalise load in line with the logging code of practice 3.4. Blocks are lubricated to maintain operational condition 3.5. Repetitive damage is diagnosed and the system design or operational practices reviewed and amended

ELEMENT**PERFORMANCE CRITERIA****4. Haul logs**

- 4.1. **Pre start-up checks** are carried out on equipment in line with site requirements
- 4.2. Yarder operations are only performed in response to breakout, landing **signals** or own transmitted signals
- 4.3. Yarder **mechanical systems** are monitored, managed and controlled to maintain log alignment and satisfy safe operating limits in line with manufacturer's specifications
- 4.4. **Tension** is controlled in running and standing lines to optimise the lift and deflection consistency with payload and rope capacities
- 4.5. **Hang ups** and **obstacles** are anticipated and haul is halted and cleared in cooperation with the **rigging slinger**
- 4.6. Haul speed, line swing and **bridling** are used to position logs on the landing and payloads are controlled in cooperation with the **chaser**
- 4.7. Rigging is returned to extraction point and positioned in line with signals from the rigging slinger
- 4.8. Yarding process and equipment faults are **recorded and reported** to the appropriate personnel

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; efficiently and safely operate a yarder
- Communication skills and interpersonal techniques sufficient to use appropriate signals 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

REQUIRED SKILLS AND KNOWLEDGE

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 yarder operation
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Characteristics of trees
- Organisational and site standards, requirements, policies and procedures for yarder operation
- Log extraction methods
- Cable logging and yarder operating techniques
- Rigging techniques and signal systems
- Industry standard lengths
- 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 perform yarder operations to recover felled logs 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 yarder operations
- following organisational policies and procedures relevant to yarder operations
- conducting yarder operations to recover felled logs in line with the work order and within prescribed organisational tolerances
- setting up a yarder in line with site conditions
- assisting in shifting lines in line with the hook tender's instructions

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

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and

EVIDENCE GUIDE

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.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and

RANGE STATEMENT

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
- 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
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the yarder operations to recover felled logs from the work site
- and may include:
- type
 - size
 - length
 - 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
- Logs** are to include:
- the finished product or trunk of a tree after trimming and cross cutting has occurred
- and may be:
- hardwood or softwood
 - for production or non-production purposes
- Environmental protection measures** may include:
- ground growth
 - canopy
 - general forest lean
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - soil and water protection
 - ground hazards and obstacles
 - contingencies for modifying operations during wet or other adverse weather conditions

RANGE STATEMENT

Equipment may include:

- yarders (mobile and static, with one or more operational drums)
- rigging equipment

and is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine

Yarder

is the crane-like vehicle which winches the logs from the felling site to the landing using a cable system

methods include:

- inspecting and modifying rigging
- pulling logs from the cutting area to the landing
- controlling speed, braking, drums, positioning of chokers and manoeuvring of obstacles

Cable operations may include:

- activities covering a full range of species, log sizes, falling and retention densities, slope
- taking into consideration environmental requirements
- use of cable systems including high lead (no skyline), standing skyline and a running skyline with hauling both uphill and downhill
- logs attached optimising payload without exceeding the lift or haul capacity of the system

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

Landing:

is the location where the yarder is positioned to receive the logs

Outriggers

are the hydraulic feet or pads put out by the yarder to level the operating base and securely set the yarder in place

Tower

is the crane like raised tower which the cables

RANGE STATEMENT

operate from to provide height for extraction of logs.

Spars

are the out-posted erections which provide elevation for the cables some distance from the yarder tower

Line shifts

are the moving of rigging lines from one area of operation to a new area

System components may include:

- ropes
- blocks
- chains
- shackles

Maintenance may include:

- regular checks of the tower and components
- diagnosis and repair of damaged components
- maintenance of fluid levels and air pressures
- refuelling and general maintenance

Guylines

support the tower or spar and other rigged erections to provide stability and strength during operation

Blocks

are pulleys cased in a block which aid in changing the direction of a force and to increase power or speed in conjunction with running cables

Pre start-up checks

are conducted to ensure:

- equipment has been set up correctly
- the systems are performing accurately and operating to optimum performance

Signals may include:

- whistle signals
- air horns
- visual signals
- two-way radio
- talk-e-tooter signals
- other audible signals

Mechanical systems are to include:

- haul speed and engine power
- yarder operational temperatures and pressures

Tension

is the level of strain or pressure upon cables and ropes

Hang ups

logs which are in the process of being extracted, become entangled or snagged with other objects,

RANGE STATEMENT

	usually other standing trees
Obstacles may include:	• standing trees • stumps • rocks • ground projections
Rigging slinger role includes:	• deciding what logs to take out first and being responsible for getting the logs to the landing without breaking them • directing the choker setter personnel in hooking up logs • transmitting signals to and from the yarder
Bridling	is the cable or chain extensions which assist with choker setting
Chasers	direct the landing of logs in conjunction with the yarder and unhook the logs at the landing site
Records and reports may include:	• yarder operations • extraction methods • tree type • size • length • diameter • inspection • quality outcomes • hazards • incidents • equipment malfunctions and may be: • manual • using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector	No sector assigned
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Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage