



Australian Government

Department of Education, Employment and Workplace Relations

FPIHAR3208B Conduct boom delimber operations

Release: 1

Modification History

Not Available

INTRODUCTION

Unit Descriptor

This unit describes the outcomes required to operate a boom delimber in a forest environment. It requires the mandatory functions of mechanically delimbing trees and cutting to length. It may also require functions of segregating and stacking logs. Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions
This unit replaces FPIHAR3208A Conduct boom delimber operations

Employability Skills

This unit contains employability skills.

Application of the Unit

The unit involves conducting boom delimber operations in a 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

Unit Sector

No sector assigned

ELEMENT

1. Plan and prepare for operations

PERFORMANCE CRITERIA

- 1.1 Applicable Occupational Health and Safety (OHS), environmental, legislative and organisational requirements relevant to conducting boom delimber operations are identified and complied with
- 1.2 Site environmental protection measures are adhered to in accordance with relevant legislation and regulations
- 1.3 Work order is reviewed and checked with appropriate personnel
- 1.4 Equipment is selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturer's recommendations
- 1.5 Tree or log extraction, placement and access requirements are identified and assessed for safe working conditions
- 1.6 Boom delimber operations are planned in accordance with site procedures and site environmental and heritage concerns
- 1.7 Communication with others is established and maintained in accordance with OHS requirements

2. Operate equipment

- 2.1 All work is conducted in accordance with work order, environmental and OHS requirements
- 2.2 Boom delimber is operated within equipment capabilities and limitations and manoeuvred to ensure safe and efficient operations
- 2.3 Pre-operational checks are carried out on equipment and attachments in accordance with manufacturer's recommendations and site procedures
- 2.4 Operating techniques are selected and adjusted as required to meet work requirements and site conditions
- 2.5 Boom delimber performance is systematically monitored to ensure and maintain efficient operations
- 2.6 Site hazards associated with boom delimber operations are detected and safe operating techniques used to minimise risk
- 2.7 Emergency plan procedures are complied with in accordance with OHS, legal and site requirements

3. Delimb individual trees

- 3.1 Movement and whereabouts of other personnel is monitored and work modified in accordance with OHS requirements
- 3.2 Access and delimbing characteristics of fallen trees are assessed and processing is planned to ensure minimal damage and maximum recovery
- 3.3 Equipment is positioned for stable and safe access to felled trees and loads are placed within rated load/reach capacity
- 3.4 Tree supply is coordinated with other site operations in accordance with site procedures
- 3.5 Equipment is safely and efficiently operated to clamp, lift and process trees through delimber with minimal damage to surrounding trees
- 3.6 Placement of logs allow access for extraction within limitations of available clearance and provide separation for grade and size when possible
- 3.7 Processing techniques are adjusted as required in response to unexpected characteristics, movement or condition of trees
- 3.8 Equipment is moved over pre-arranged routes with minimal damage to the environment

4. Carry out machine operator maintenance

- 4.1 Equipment lock-out procedures are followed in accordance with OHS requirements and site procedures
- 4.2 Visual inspection and fault finding procedures are conducted in accordance with manufacturer's recommendations and site procedures
- 4.3 Routine operational servicing is conducted to maintain optimum operational performance of equipment in accordance with manufacturer's recommendations
- 4.4 Equipment, attachments and other ancillary equipment are

cleaned and stored in accordance with manufacturer's recommendations and site procedures

4.5 Faults, malfunctions or problems with equipment are diagnosed and reported in accordance with site procedures

4.6 Boom delimber operation results are recorded and reported in accordance with site procedures

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- The ability to comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for boom delimber operations
- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operate boom delimber and attachments to delimb trees and cut to length
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation and interpret, apply and convey information in written, diagrammatic and/or verbal form
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Basic knowledge and understanding of applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for boom delimber operations
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for boom delimber operations
- Equipment processes, technical capability and limitations
- Operational procedures and checks including start-up and shut-down procedures
- Established communication channels and protocols
- Principles of cultural diversity and access and equity
- Problem identification and resolution strategies and common

fault finding techniques

- Types of tools and equipment and procedures for their use, operation and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

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 accordance 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
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in accordance 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
- heritage and traditional land owner issues

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
- ethical standards

- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Operations	• must include the mechanical delimbing of trees and cutting to length • may include the segregating and stacking of logs
Environmental protection measures	may include action to limit the impact to: • ground growth and canopy • soil and water may include action to limit the impact of: • general forest lean • wind speed and direction • fallen trees • density of trees • ground slope • ground hazards • obstacles
Work order is to include:	• instructions for boom delimber operations including trees/logs to be handled and cutting length requirements and may also include: • information of site plans, forest operational plans and emergency procedures in case of fire and/or accident
Appropriate personnel may include:	• supervisors • clients • colleagues • managers
Logs	• handled may cover the full range of species • size and conditions to be encountered in local harvesting operations • softwood or hardwood
Safe working conditions	may relate to: • identification of risks and hazards • unsafe ground • fences • holes, pot holes • materials • vehicles • abandoned equipment • personnel • adverse weather conditions (electrical storms, floods) • fires

Planning	• requires ensuring minimal equipment and log movement during operations including determining level and stable surfaces for safely relocating loads
Environmental and heritage concerns may include:	• dust • noise • water • flora and fauna • heritage legislation • culturally sensitive sights and artefacts • plantations • native forest
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
Capabilities	of equipment and/or attachments may include: • efficient and safe operating speed • duration of operation • type of activities performed • weight and/or load limitations • operating limitations
Pre-operational checks	are conducted to ensure equipment and attachments have been set-up correctly, the systems are performing accurately and operating to optimum performance and; • may be to visual and audio warning devices and lights, engine and stop engine lights, fluid levels, cab display instrumentation and gauges and on-board computer systems. • may also involve start-up, park and shut-down procedures including safety mechanisms operation (horn, operating lights), correct location of equipment, vehicle security
Attachments may include:	• electronic measuring equipment and cut-off saws
Site conditions may include:	• wet, dry • day, night • stability of ground • broken ground • slope of working surface • location of water table

Hazards may include:

- uneven/unstable terrain
- trees
- fires
- overhead and underground services
- bridges
- buildings
- excavations
- traffic
- embankment
- cuttings
- structures and hazardous materials

Emergency plan may include:

- notification of authorities
- evacuation procedures
- isolation procedures
- equipment shut-down procedures
- clean up
- first aid
- use of personal protective equipment
- guarding

Positioning of equipment

ensures:

- machine stability to minimise movement during and between delimbing operations
- safe access to felled trees
- safe processing and placement clearance

Visual inspection and fault finding procedures may include:

- vehicle number
- danger tags
- personnel proximity
- tyres and rim condition
- wheel nuts and studs
- light positioning and cleanliness
- radiator top up tank
- oil leaks, fuel leaks, water leaks
- no combustible material around exhaust
- damage to equipment
- portable fire extinguisher
- fire suppression system
- cab mounts
- windows
- engine oil to be checked before starting engine,
- grease lines
- cab conditions

Routine operational servicing may

- checking fluid levels

include:

- greasing
- tightening loose fittings
- filter changing

Cleaning methods may include:

- water
- steam
- degreasing
- vacuum
- forced air

Records and reports may include:

- end of shift documentation
- work log and;
- may be compiled using a computer-based system or other appropriate organisational communication

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 conduct boom delimber 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:

- compliance with applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to conducting boom delimber operations
- compliance with organisational policies and procedures relevant to conducting boom delimber operations
- communicating effectively and working safely with others in the work area
- planning, preparing and carrying out boom delimber operations to safely and efficiently delimb trees mechanically
- conducting pre-operational checks and routine operational servicing of equipment

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 essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with 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 FPI05 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 underpinning knowledge
- Assessment must be by direct observation of tasks, with questioning on underpinning 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 essential underpinning 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