



Australian Government

FWPCOT3330 Apply tree jacking techniques in felling trees

Release: 1

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Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to use tree jacking techniques in the process of felling trees 180 degrees away from their natural direction of fall using purpose-built tree jacks.

The unit applies to individuals whose job role involves using tree jacking techniques in the process of felling trees.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for tree jacking	1.1 Determine job requirements from work order or instruction, and where required seek clarification from appropriate personnel 1.2 Identify type and quantity of trees to be tree jacked and assess activities for safety and environmental protection practices 1.3 Confirm safety and environmental requirements for the task,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	including the use of personal protective equipment (PPE), according to workplace procedures 1.4 Identify, assess and take actions to mitigate risks and hazards associated with tree jacking operations 1.5 Identify emergency and evacuation procedures to follow in the event of an incident or accident 1.6 Consult with appropriate personnel to ensure that work is coordinated effectively with others in the workplace 1.7 Select tools, equipment, communication systems and materials for tree jacking, and check for serviceability according to workplace procedures
2. Plan tree jacking	2.1 Assess environmental conditions and use outcomes to plan felling of each tree 2.2 Monitor location and movement of other personnel, and modify work to ensure safety 2.3 Assess tree, location and stability for conditions likely to affect safety of tree jacking activities 2.4 Visually assess tree for defects, grade and recovery status 2.5 Select escape route, and clear route and growth around tree manually or mechanically 2.6 Assess fall direction and allowable degree of error, considering hang ups, damage, extraction constraints and available open space 2.7 Plan cutting sequence to control direction of fall and minimise damage to tree and surrounding environment 2.8 Mark trees too dangerous to fell safely and refer to appropriate personnel 2.9 Confirm chain of command for communication of information and instructions to ensure safety of tree jacking operation
3. Tree jack trees	3.1 Complete equipment pre-start-up checks 3.2 Remove and clear leaders according to tree jacking work plan 3.3 Diagnose unexpected characteristics of tree and review tree jacking work plan 3.4 Make jacking slots to provide for placement of tree jacks according to planned falling direction 3.5 Adjust cutting technique and use tree jacks to control movement

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	and direction of tree being felled 3.6 Complete felling and use planned safe exit route according to safety procedures 3.7 Monitor ground movement of trees and assess and clear trees that hang up 3.8 Record and report tree jacking process and equipment faults to appropriate personnel
4. Complete chainsaw and tree jack operator maintenance	4.1 Follow workplace safety procedures to lock out equipment 4.2 Check chain for bluntness or damage 4.3 Remove, sharpen, adjust and replace chain and other components according to manufacturer recommendations 4.4 Assess and adjust chainsaw set-up to suit cutting conditions 4.5 Maintain operational condition of chainsaw to meet standards prior to use 4.6 Check and service tree jacks according to manufacturer recommendations

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Read routine, familiar workplace documents, including workplace health and safety procedures, work plans and manufacturer manuals
Writing	Complete basic written reports on tree jacking process and equipment faults
Oral communication	- Ask questions and apply active listening skills to clarify contents of work plans - Provide clear, unambiguous verbal directions to others about jacking and felling process to ensure safety of self and others
Numeracy	Perform estimations and basic calculations related to number, time, length and diameter of trees

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT3330 Apply tree jacking techniques in felling trees	FWPHAR4201 Apply tree jacking techniques	Revised title Updated Application Statement Minor changes to Elements and Performance Criteria Updated Performance Evidence Minor change to Knowledge Evidence Updated Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3330 Apply tree jacking techniques in felling trees

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared, planned and applied tree jacking techniques on two trees according to work order and workplace and safety procedures.

In performing this activity, the individual has:

- assessed type, quantity and characteristics of trees to be jacked, as well as terrain and environmental conditions, to plan fall direction and take actions to mitigate risks and hazards
- made jacking slots, used tree jacks and fell trees using planned safe escape route according to safety procedures
- reported tree jacking process and equipment faults to appropriate personnel
- performed operator maintenance on a chainsaw on one occasion
- followed safety and environmental protection requirements for the task, including the use of personal protective equipment (PPE).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- key features of environmental conditions and effects on tree felling:
 - general forest lean
 - ground growth
 - ground hazards and obstacles
 - ground slope
 - gullies
 - presence and density of seed and habitat trees
 - water courses
 - wet and adverse weather conditions

- wind speed and direction
- environmental protection practices:
 - safe disposal of waste material
 - cleaning of plant, tools and equipment
- typical tree defects and how these affect tree jacking and felling:
 - stability
 - insect defects
 - knots
 - resin pockets
 - shakes
- techniques used in the tree jacking process:
 - tree jacking
 - chainsaw cutting sequences and techniques used to control direction of fall
 - clearing trees that hang up
- communication methods used for tree jacking activities:
 - verbal
 - hand signals
 - eye contact with other operators
 - use of electronic communication devices
- typical industry chain of command for communication of information and instruction
- types, purpose, features, operation and basic non-specialist repair and maintenance of tree jacking tools and equipment:
 - tree jacks
 - chainsaws
 - maintenance tools and equipment
 - personal protection equipment
- workplace procedures specific to tree jacking activities:
 - workplace health and safety, with particular emphasis on PPE, pre-start-up checks and equipment lock-out for safe use of chainsaws
 - use and maintenance of equipment
 - communication reporting line during tree jacking process
 - recording and reporting tree jacking process and equipment faults.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a forest work environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- trees to be felled that are 180 degrees away from their natural direction of fall
- tools and equipment for tree jacking operations, including tree jacks, chainsaws and maintenance tools and equipment for chainsaws and tree jacks
- PPE suitable for tree jacking activities and chainsaw maintenance
- specifications:
 - manufacturer instructions for use and maintenance of equipment
 - work order or instruction with specific instructions for tree jacking operations
 - workplace safety and environmental policies and procedures applicable to tree jacking operations.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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