

**Modification history**

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

FWPHAR3XXX	Operate harvesting machine with winch-assist system
<b>Application</b>	<p>This unit of competency describes the skills and knowledge required to operate a harvesting machine with a winch-assist system. This unit includes planning for work, identifying hazards and risks, assessing worksite conditions, safely and securely positioning the anchor, operating a harvester with a winch-assist system and carrying out machine operator maintenance.</p> <p>The unit applies to individuals who work as winch-assisted harvester operators in a forest or plantation setting.</p> <p>Individuals undertaking this unit must be competent operators of at least one of the following types of forest machines: skidder, forwarder, harvester or feller buncher.</p> <p>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.</p> <p>No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
<b>Prerequisite Unit</b>	Nil
<b>Unit Sector</b>	Harvesting and Haulage

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 work	1.1 Review work order or instruction to determine job requirements and, where required, seek clarification from appropriate personnel 1.2 Confirm production targets for harvesting and assess wood flow requirements to ensure efficient machine operation and overall productivity 1.3 Review workplace health and safety procedures, including the use of personal protective equipment, lockout procedures and safe manual handling techniques 1.4 Identify, assess and take actions to mitigate risks and hazards associated with winch-assist harvesting operations 1.5 Identify workplace environmental protection procedures for protecting natural and cultural assets, minimising and disposing of waste material, recycling and reusing materials and cleaning plant, tools and equipment 1.6 Identify emergency plan procedures to follow in the event of an emergency 1.7 Identify area in which winch-assisted harvesting operations are to be conducted 1.8 Inspect, test, replace and maintain cable and end termination fittings according to manufacturer specifications and workplace procedures.

<b>Elements</b>	<b>Performance Criteria</b>
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Assess worksite	<p>2.1 Identify and assess conditions on worksite, including terrain, ground conditions and surface cover, likely to affect winch-assisted harvesting operations</p> <p>2.2 Assess maximum safe slope on worksite taking into account terrain conditions, slope and soil type according to workplace procedures</p> <p>2.3 Carry out risk assessments according to workplace procedures</p> <p>2.4 Evaluate outcomes of assessment of site conditions, maximum safe slope and risks to determine if any changes are required to work order or work instructions</p>
3. Position winch-assist machine	<p>3.1 Determine position of winch assist machine according to workplace procedures</p> <p>3.2 Assess proposed position of winch assist machine against criteria for placement of machine according to safety and workplace procedures</p> <p>3.3 Test position of winch assist machine according to workplace procedures</p>
4. Operate winch-assist harvesting machine	<p>4.1 Connect harvesting machine to winch assist machine according to manufacturer instructions and workplace procedures</p> <p>4.2 Carry out pre-start checks of harvesting machine according to manufacturer instructions and workplace procedures</p> <p>4.3 Position harvesting machine on slope according to workplace procedures</p> <p>4.4 Check and maintain condition of cable by setting correct tension, working within specified departure angles, minimising shock loading, inspecting for wear and integrity, and avoiding physical damage to cable</p> <p>4.5 Apply techniques to increase traction and maximise stability of harvesting machine before and during commencing operational tasks</p> <p>4.6 Complete operational tasks according to work order or work instructions</p>
5. Carry out machine operator maintenance	<p>5.1 Park and shut down harvester according to manufacturer instructions and workplace procedures</p> <p>5.2 Clean, check and carry out routine maintenance activities on harvesting machine and winch-assist machine to maintain optimum operational performance according to manufacturer specifications</p> <p>5.3 Identify and report faults, malfunctions or problems according to workplace procedures and manufacturer recommendations</p> <p>5.4 Record harvester operations and maintenance activities</p>

<b>Foundation Skills</b>	
<i>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.</i>	
<b>Skill</b>	<b>Description</b>
Reading	<ul style="list-style-type: none"> <li>• Read production plans, site safety and environmental management plans in a forest harvesting environment</li> <li>• Read standard operating procedures and/or manufacturer instructions for the operation of forest harvesting machinery</li> </ul>
Writing	<ul style="list-style-type: none"> <li>• Record operation, production and machine maintenance on paper-based or electronic media</li> </ul>
Oral Communication	<ul style="list-style-type: none"> <li>• Ask questions to clarify contents of production plans</li> </ul>
Numeracy	<ul style="list-style-type: none"> <li>• Interpret numerical and graphical information shown on machine screens, displays and gauges relevant to safe machine operation</li> </ul>

<b>Unit Mapping Information</b>			
<b>Code and title current version</b>	<b>Code and title previous version</b>	<b>Comments</b>	<b>Equivalence status</b>
FWPHAR3XXX Operate harvesting machine with winch-assist system	Not applicable	New unit	No equivalent unit

<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47">https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47</a>
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<b>TITLE</b>	<b>Assessment requirements for FWPHAR3XXX Operate harvesting machine with winch-assist system</b>
<b>Performance Evidence</b>	
<p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has:</p> <ul style="list-style-type: none"> <li>• planned, prepared and safely and effectively operated two different harvesting machines with winch-assist system according to a work order or work instructions. The harvesting machines must be selected from the following: <ul style="list-style-type: none"> <li>• skidder</li> <li>• forwarder</li> <li>• harvester</li> <li>• feller buncher</li> </ul> </li> <li>• carried out routine maintenance on a harvesting machine with winch-assist system on two occasions.</li> </ul>	
<b>Knowledge Evidence</b>	
<p>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</p> <ul style="list-style-type: none"> <li>• information and requirements in production, site safety and environmental management plans</li> <li>• safe work procedures and safe working zones in forest harvesting operations</li> <li>• hazards and risks related to operating harvesting machines with winch-assist system and factors that can change or introduce new hazards</li> <li>• types and correct positioning of warning signs, vehicle-to-vehicle communication systems and procedures to maintain communication and workplace safety during winch-assist harvesting operations</li> <li>• emergency response procedures including firefighting</li> <li>• potential impacts of winch-assist harvesting operations on onsite and offsite environmental values including cultural heritage, flora, fauna, ground compaction, water contamination and soil erosion</li> <li>• environmental protection procedures</li> <li>• types of winch-assist systems: <ul style="list-style-type: none"> <li>• systems with one cable, where the winch is attached to the harvesting machine (integral)</li> <li>• systems with one or more winches fitted to a machine positioned at the top of an incline (independent)</li> </ul> </li> <li>• reasons for using winch-assist system: <ul style="list-style-type: none"> <li>• safety</li> <li>• available steep slope fibre</li> <li>• reduce manual felling</li> </ul> </li> <li>• maximum safe slope</li> <li>• features of winch-assist system: <ul style="list-style-type: none"> <li>• cables and end termination fittings</li> <li>• safety, braking and emergency backup systems</li> </ul> </li> <li>• procedures for operating winch assist system <ul style="list-style-type: none"> <li>• prestart checks of cables and end termination fittings</li> <li>• operation of controls for winch-assist system</li> <li>• procedures for positioning machine on slope</li> <li>• techniques to increase traction and maximise stability of harvesting machine before and during operation</li> <li>• methods to detect faults as outlined in operator manual</li> <li>• machine and cable systems maintenance and servicing requirements as outlined in operator manual</li> </ul> </li> <li>• criteria for safe placement of winch-assist machine: <ul style="list-style-type: none"> <li>• access</li> <li>• ground stability</li> <li>• alignment to felling face</li> <li>• cable path</li> </ul> </li> </ul>	

<p><b>Knowledge Evidence</b></p> <ul style="list-style-type: none"> <li>• cable departure point from anchor</li> <li>• effects of slope and terrain conditions on machine stability and operation</li> <li>• harvesting machine types, specifications, restrictions and safe operating procedures including stability and operation in different terrain conditions and slopes, and methods to shut down the machine as outlined in workplace procedures or operator manual</li> <li>• reporting requirements regarding site, incident and hazard, personal reporting, check-in, production, machine maintenance and block completion.</li> </ul>	
<p><b>Assessment Conditions</b></p> <p>Assessment of the skills in this unit of competency must take place under the following conditions:</p> <ul style="list-style-type: none"> <li>• physical conditions: <ul style="list-style-type: none"> <li>• skills must be demonstrated in a forest harvesting setting</li> </ul> </li> <li>• resources, equipment and materials: <ul style="list-style-type: none"> <li>• harvesting machines with winch-assist system</li> <li>• trees to be harvested</li> <li>• personal protective equipment required in harvesting operations</li> <li>• vehicle-to-vehicle communication system</li> </ul> </li> <li>• specifications: <ul style="list-style-type: none"> <li>• access to work order or instruction detailing harvesting activities to be carried out by operator</li> <li>• access to workplace policies and procedures which cover current Work Health and Safety Acts or Occupation Health and Safety Acts, regulations and related industry standards and codes of practice applicable to forest harvesting operations</li> <li>• access to workplace policies and procedures which cover current Environment Protection Acts, regulations and related industry standards and codes of practice applicable to forest harvesting operations</li> <li>• access to production plan</li> <li>• access to workplace safety and environmental protection plans</li> <li>• access to site emergency procedure</li> <li>• access to workplace safe operating procedures or operator manual for harvesting machine and winch-assist system</li> <li>• access to user manual for vehicle-to-vehicle communication system.</li> </ul> </li> </ul> <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
<p><b>Links</b></p>	<p>Companion Volume implementation guides are found in VETNet - <a href="https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47">https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47</a></p>