



Australian Government

FWPHAR3229 Operate single grip harvester

Release: 1

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Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to operate a single grip harvester for log production and use optimised production processes in a commercial forest harvesting environment. The main job functions are to fell trees, delimb, cut stems to optimum value and segregate log products. Activities are to be conducted safely and to ensure optimal value recovery and extraction of logs.

The unit applies to individuals who work as single grip harvester operators in small or larger harvesting crews. Operators generally work under broad direction to complete routine activities related to harvesting operations and take responsibility for their work.

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

Pre-requisite Unit

Nil

Unit Sector

Harvesting (HAR)

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. Plan and prepare to operate a single grip harvester	1.1 Review production plan, confirm its targets for felling and processing and assess wood flow requirements to ensure efficient machine operation and overall productivity 1.2 Confirm, identify and report health, safety, environmental and heritage risks of operation in line with standard operating procedures

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 site safety and environmental management plans 1.3 Apply risk control measures in line with standard operating procedures, site operational plan, legislative requirements and industry standards to eliminate or minimise risks 1.4 Identify emergency plan procedures to follow in the event of an emergency 1.5 Use production plan to identify entry points to the coupe, access to tree, extraction routes and directions to landings to facilitate an efficient process and minimise interference with other forestry operations 1.6 Check work area to ensure there is appropriate space to safely manoeuvre both the machine and stems, stockpile processed logs and store or dispose of stem waste and tops according to production plan 1.7 Assess terrain characteristics to establish machine stability 1.8 Identify cutting sequence and felling directions to minimise damage to the trees and the surrounding environment in line with the production plan 1.9 Use log cutting instructions and/or production plan to determine the product types and quality parameters to be produced 1.10 Carry out pre-operational checks on machine in line with workplace procedures or manufacturers' recommendations to ensure optimal production performance and operational effectiveness
2. Operate single grip harvester	2.1 Use industry-accepted warning signs, vehicle-to-vehicle communication systems and procedures to maintain communication and workplace safety during operation 2.2 Assess individual trees to determine the best machine position, fall direction, hazards, placement of cuts and grade quality 2.3 Drive and position the machine and harvester head in response to tree characteristics and terrain conditions to ensure stability 2.4 Use appropriate methods to reset the harvesting head length counter to prevent loss of log volume or value 2.5 Assess tree species, size and quality characteristics in line with log cutting instructions and/or production plan requirements and use cabin controls to clamp, cut and produce logs with optimal length, quality and diameter 2.6 Adjust clamping, cutting and processing techniques in response to unexpected characteristics, movement or condition of tree to minimise

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	log and log surface damage in line with the production plan requirements 2.7 Move machine over pre-arranged routes to minimise environmental impact
3. Segregate and stack logs	3.1 Visually assess logs for size, species and quality characteristics during stacking at the pre-bunching site to ensure they are placed in the appropriate stack for transport and further processing and in line with the production plan requirements 3.2 Mark and report logs that cannot be clearly and safely assessed in line with the production plan requirements 3.3 Position and construct log stacks to avoid log damage, provide stability, restrict height for efficient extraction and allow space for the conduct of other operations in line with worksite layout and the production plan requirements 3.4 Maintain stack separation and identification to ensure products are presented for an optimum transport and logistics cycle time and are in line with industry standards and production plan requirements
4. Carry out machine operator maintenance	4.1 Park, shut-down, de-energise and isolate single grip harvester in line with workplace procedures or manufacturers' recommendations 4.2 Adjust feed roller pressures and delimbing knife settings to minimise roller stud and delimbing damage 4.3 Clean, check and carry out routine maintenance tasks on single grip harvester to maintain optimum performance 4.4 Identify and report machine faults, malfunctions or problems in line with workplace procedures or manufacturers' recommendations 4.5 Clean work area and dispose of or recycle waste materials in line with site environmental management plan 4.6 Record single grip harvester operations and maintenance activities

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 production plans, site safety and environmental management plans in a forest harvesting environment - read standard operating procedures and/or manufacturers' instructions for the operation of forest harvesting machinery
Writing	record operation, production and machine maintenance on paper based or electronic media
Oral Communication	- interact verbally and non-verbally using agreed systems and processes to communicate with others on site to ensure safe and effective single grip harvester operations - use appropriate vocabulary including technical language directly relevant to role
Numeracy	- interpret gauges relevant to safe operation of harvesting machinery - determine construction of stable log stack
Navigate the world of work	understand main tasks, responsibilities and boundaries of own role
Interact with others	- use modes of communication suitable to purpose to confirm and clarify understanding - communicate and report operational and safety information to on-site personnel
Get the work done	- recognise and respond to routine problems - plan and organise own work activities and resources

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPHAR3229 Operate single grip harvester	FWPHAR3214 Operate a single grip harvester	Significant changes to reflect industry requirements for a safe appropriate and efficient operation, including value recovery and product quality. A new element and new PCs were added, most PCs were edited and PE and KE increased in content to map against the revised	No equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
		PCs. Additional foundation skills identified. Code and title change for consistency with other machine operation units.	

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPHAR3229 Operate single grip harvester

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Performance Evidence

An individual demonstrating competency must satisfy all the elements and performance criteria of this unit. There must be evidence that, on at least one occasion, the individual has:

- planned, prepared and safely and effectively operated a single grip harvester to cut and produce log products with optimal length, quality and diameter in line with log cutting instructions, quality specifications or production plan
- checked risks associated with the operation and applied standard operating procedures
- followed production plan requirements, log cutting instructions or quality specifications and site safety and environmental management plan
- adjusted machine driving and positioning techniques in response to terrain conditions and unexpected characteristics, movement or condition of tree
- applied felling and processing techniques to minimise damage to the stem, logs, standing trees, machine and surrounding environment in line with the production plan requirements
- applied knowledge of log species, quality characteristics and defects during operation in line with the production plan requirements
- placed, stacked and presented logs for efficient transportation and identification in line with the production plan requirements
- communicated effectively with others in the work area
- shut down, de-energised and isolated machine in line with workplace procedures and operator's manual
- carried out routine maintenance on single grip harvester.

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:

- information and requirements contained in a production plan, log cutting instructions or product quality specifications and site safety and environmental management plans
- hazardous or safe working zones in forest harvesting operations

- health and operational hazards or risks related to single grip harvesting operations and factors that can change or introduce new hazards or risks including characteristics of difficult trees and risks associated with falling them safely
- industry-accepted work health and safety risk control measures, legal obligations of the current Work Health and Safety Acts or Occupational Health and Safety Acts and regulations and requirements of industry standards and/or codes of practice for single grip harvesting operations as outlined in workplace procedures and production plan
- industry-accepted warning signs, their correct positioning, vehicle-to-vehicle communication systems and procedures to maintain communication and work safety during single grip harvesting operations
- required emergency response procedure including firefighting resources and emergency response
- potential impacts of single grip harvester operations on onsite and offsite environmental values including cultural heritage, flora, fauna, ground compaction, water contamination and soil erosion
- industry-accepted environmental control measures, restrictions, legal obligations of the current Environment Protection Acts and regulations and requirements of industry standards and/or codes of practice for single grip harvesting operations as outlined in workplace procedures and production plan
- typical location of loading and/or landing site
- tree felling patterns
- extraction methods
- wood flow requirements and extraction and production bottlenecks particular to a production system
- tree shapes, species, quality characteristics and log defects particular to the site and production system
- regional quality requirements for log products with particular end uses, markets and values
- requirements and methods to achieve maximum stump height in response to unexpected characteristics or condition of the trees and ground level
- maximum log damage and defect and minimum quality allowances particular to a production system
- techniques particular to a production system to avoid mechanical damage to logs during felling, processing and stacking; achieve saw cuts at both ends of the product that meet quality specifications; avoid incorrect or excessive log butting; separate and present logs for efficient transportation and identification of the product
- effects of weather on ground conditions
- effects of slope and terrain conditions on machine stability and operation
- machine specifications, restrictions and safe operating procedures including stability and operation in different terrain conditions, slopes and road types, chain shot rules, methods to shut down, de-energise and isolate the machine and optimal direction of travel as outlined in workplace procedures or operator's manual
- using machine cabin controls
- techniques for safe and efficient driving of single grip harvester

- location of machine's major mechanical systems and parts of the machine in which energy is stored as outlined in operator manuals for safe and efficient conduct of the machine operator maintenance tasks
- methods to conduct machine pre-operational checks and detect faults as outlined in workplace procedures or operator's manual
- machine maintenance and servicing requirements as outlined in workplace procedures or operator's manual
- industry-accepted reporting requirements regarding site, incident and hazard, personal reporting, check-in, production, machine maintenance and block completion.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a forest harvesting site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - single grip harvester
 - suitable trees to fell and process
 - personal protective equipment required in harvesting operations
 - vehicle-to-vehicle communication system
- specifications:
 - 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
 - access to workplace policies and procedures which cover off on current Environment Protection Acts, regulations and related industry standards and codes of practice applicable to forest harvesting operations
 - access to production plan, site operational plan, log cutting instructions and safety and environmental management plans
 - access to site emergency procedure
 - access to workplace standard operating procedures for single grip harvester or operator's manual
 - access to user manual for vehicle-to-vehicle communication system.

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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