



Australian Government

FDFWGG3008A Operate a mechanical harvester

Release: 2

FDFWGG3008A Operate a mechanical harvester

Modification History

This unit supersedes and is equivalent to FDFWGGMHB Operate a mechanical harvester.
April 2012: Minor typographical corrections.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to identify harvesting requirements and then set up and operate a mechanical harvester to meet those requirements.
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Application of the Unit

Application of the unit	This unit applies to the operation of specialised mechanical harvesting equipment used in wine grape growing.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills	This unit contains employability skills.
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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.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for mechanical harvesting	1.1 Harvesting requirements are identified 1.2 Equipment is checked to confirm readiness for use 1.3 Equipment is set up to meet harvesting requirements
2. Operate mechanical harvester	2.1 Equipment is started up according to workplace procedures 2.2 Equipment performance is monitored to confirm performance is maintained within specification 2.3 Out-of-specification equipment performance is identified, rectified and/or reported 2.4 Vines are machine harvested according to workplace requirements 2.5 Problems and anomalies are recognised and rectified and/or reported 2.6 Equipment is maintained in good working order
3. Complete mechanical harvesting operations	3.1 Equipment is shut down according to workplace procedures 3.2 Equipment is cleaned and stored according to workplace procedures 3.3 Waste generated by both the process and cleaning procedures is collected, treated, disposed of or recycled according to workplace procedures 3.4 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Workplace information is recorded in the appropriate format

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

Ability to:

- Access workplace information to identify harvesting requirements
- Select, fit and use appropriate personal protective clothing and/or equipment
- Liaise with other work areas
- Confirm equipment status and condition
- Set up mechanical harvester to meet harvesting requirements
- Start up the mechanical harvester
- Operate a mechanical harvester according to harvesting conditions and requirements. These may include consideration of:
 - crop level
 - grape variety
 - vine age
 - row height, width and trellis design
 - slope, angle of row
 - visibility
 - other vineyard activities
- Monitor mechanical harvester operation. This will include monitoring:
 - vine damage
 - grape quality and maturity
 - harvesting effectiveness (amount of fruit left in fruiting zone)
 - matter other than grape (MOG) collected
 - hours worked and service history of machinery
 - problems and anomalies
 - climatic conditions
- Take corrective action in response to out-of-specification results or non-compliance
- Recognise problems and anomalies
- Report and/or record problems and/or corrective action taken
- Shut down equipment in response to an emergency situation
- Shut down equipment in response to routine requirements
- Identify, rectify and/or report environmental non-compliance
- Clean and store equipment
- Maintain work area to meet housekeeping standards
- Carry out routine maintenance of equipment according to enterprise procedures

REQUIRED SKILLS AND KNOWLEDGE

- Interpret mechanical drawings according to enterprise procedures
- Use hand and power tools according to enterprise procedures
- Use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- Work cooperatively within a culturally diverse workforce

Required knowledge

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

Knowledge of:

- Effect of different climatic conditions on timing and management of harvest
- Basic vine physiology, as it applies to:
 - water intake
 - nutrient uptake
 - photosynthesis
 - respiration and transpiration
 - translocation
- Parts of the root, trunk, shoot and fruit systems of the grapevine, their role in how the vine works and their contribution to fruit quality, including:
 - buds, nodes and tendrils
 - cambium, epidermis, phloem and xylem
 - leaf blade, bract and petiole
 - bunch, berries and flowers
- Vine types, their characteristics and uses, including:
 - family, genus and species
 - Vitis vinifera and commercial varieties
 - native species and hybrids (e.g. labrusca)
 - rootstocks and scion stock
- Industry processes for new variety development
- Annual growth stages of grapevines, including:
 - budburst
 - flowering
 - veraison
 - maturity
- Key grape varieties and their distinguishing features. This may include factors, such as:
 - berry and bunch characteristics
 - frost and disease resistance
 - flavour and style
- Factors that affect grape ripening (e.g. canopy management, irrigation, grape variety and

REQUIRED SKILLS AND KNOWLEDGE

- climatic conditions)
- Effect of fruit quality on wine
- Quality assurance procedures and controls
- Common problems and anomalies
- Harvesting procedures and operating parameters
- Significance and method of monitoring equipment performance
- Role and operating difficulties of harvester support operator
- Purpose of mechanical harvester components
- Common faults and corrective action required
- Occupational health and safety (OHS) hazards and controls
- Environmental issues and controls
- Procedures and responsibility for reporting problems
- Cleaning and storage requirements associated with changeovers and types of shutdowns
- Emergency and routine shutdown sequences
- Recording and reporting procedures and requirements
- Cleaning and storage procedures
- Routine maintenance procedures for equipment where relevant
- Interpretation of mechanical drawings where relevant
- Procedures for use of hand and power tools where relevant

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

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of ability to:

- use personal protective clothing and equipment
- select and confirm readiness of equipment and prepare according to instructions
- attach and set up equipment to meet requirements
- start and operate equipment in accordance with operation instructions and requirements of workplace and task
- perform emergency and routine shutdowns
- take corrective action in response to out-of-specification results or non-compliance
- demonstrate knowledge of OHS hazards, controls and emergency procedures
- sort, collect, treat, recycle or dispose of waste
- record information appropriately.

Context of and specific resources for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- personal protective clothing and equipment as required
- work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements
- instructions, information, specifications and schedules as required
- equipment, services and corresponding information as required
- products and materials as required
- internal and external customers and suppliers as required
- cleaning procedures, materials and equipment as required

EVIDENCE GUIDE	
	documentation and recording requirements and procedures.
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

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.	
Policies and procedures	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
Workplace information	Workplace information can include: - Standard Operating Procedures (SOPs) - specifications - production schedules - instructions - routine maintenance schedules - work notes - Material Safety Data Sheets (MSDS) - manufacturer instructions - verbal directions from manager or supervisor
Equipment	Equipment includes: - mechanical harvesting machinery - appropriate tools
Terrain	Terrain must enable safe and effective operation of a

RANGE STATEMENT	
	mechanical harvester. It may include: • tracks • access roads • straight or curving vineyard rows • open paddocks • flat, undulating, steep, hilly or terraced land • on- and off-road environments
Conditions	Conditions must enable safe and effective operation of a mechanical harvester. These may include: • dry • wet • slippery • boggy • icy • foggy • windy • day and night conditions.
Confirming equipment status	Confirming equipment status involves: • checking that all safety standards and pre-start requirements are met and that equipment is operational
Information systems	Information systems may be: • print or screen based
Problems and anomalies	Problems and anomalies may include: • adverse harvesting conditions • diseased, immature, over-ripe or rotten fruit • operating hazards, such as broken trellis and wires • MOG • equipment malfunction or breakdown
Grapes	Grapes may vary according to: • grape variety • crop quality • quantity • trellis systems • collection procedures

Unit Sector(s)

Unit sector	Wine operations
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