

Modification history

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

FWPHAR3XXX	Operate split flail and wood chipper fed by excavator with log grapple
Application	<p>This unit of competency describes the skills and knowledge required to operate split flail and wood chipper fed by an excavator with log grapple in an infield wood chipping operation. This unit includes preparing for infield wood chipping activities, conducting pre-operational machinery checks, setting up machinery, loading whole trees and logs with excavator with log grapple, monitoring machine operations, and implementing machine maintenance.</p> <p>The unit applies to individuals who work as infield wood chipping machine operators in a forest or plantation setting.</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>
Prerequisite Unit	Nil
Unit Sector	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 infield wood chipping activities	1.1 Review work order or instruction to determine job requirements and, where required, seek clarification from appropriate personnel 1.2 Confirm production targets 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 machine operations 1.5 Identify and implement 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 type and quantity of material to be chipped and quality requirements for chipped material 1.8 Consult with appropriate personnel to ensure that work is coordinated effectively with others in the workplace 1.9 Conduct pre-operational machinery checks according to manufacturer recommendations and workplace procedures 1.10 Plan infield wood chipping activities according to work order or instruction

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Set up split flail and wood chipper	<p>2.1 Determine an appropriate location for flail and wood chipper</p> <p>2.2 Position flail and chipper according to work requirements, manufacturer instructions, terrain characteristics, workflow and workplace safety requirements</p> <p>2.3 Secure and set up flail and chipper according to work requirements, manufacturer instructions and workplace safety requirements</p>
3. Flail and chip whole trees and logs	<p>3.1 Assess whole trees and logs and dispose of or recycle material unsuitable for chipping according to environmental protection practices, quality requirements and workplace procedures</p> <p>3.2 Position excavator for best visibility of flail infeed and site operations, including chip flow into trailer, while allowing sufficient room for trees and logs to be safely stockpiled at flail during operations</p> <p>3.3 Use excavator cabin controls to grapple whole trees and logs according to manufacturer instructions</p> <p>3.4 Systematically load flail/chipper using excavator and handling techniques at feed rate applicable to safety and stability of excavator, characteristics of material to be chipped, chip quality, capacity of flail and chipper and loading capacity of transport vehicles</p> <p>3.5 Operate excavator and manoeuvre log grapple safely and efficiently to avoid harm to people, flail / chipper, other machines and the environment</p> <p>3.6 Ensure all merchantable product from the site is loaded into flail/chipper and all waste is managed according to work plan</p> <p>3.7 Chip flailed material to chip sizes and bark allowances specified in work order</p> <p>3.8 Monitor output for compliance with flail and chip specifications</p> <p>3.9 Ensure safety of self and others, including monitoring location of people in relation to flail and chipper, while machines are in operation</p> <p>3.10 Load chipped material into transport vehicles according to vehicle load and distribution requirements and load covering requirements</p> <p>3.11 Respond to critical situations requiring emergency shutdown to prevent personal injury or damage to machine or product.</p>
4. Carry out operator maintenance	<p>4.1 Lock out machine according to workplace safety and manufacturer requirements</p> <p>4.2 Access tools and service equipment required for performing routine maintenance according to manufacturer instructions</p> <p>4.3 Check flail chains, chipper knives, counter knives and anvil for wear and damage at appropriate or recommended intervals</p> <p>4.4 Remove, replace and dispose of chains and cutters according to manufacturer recommendations, workplace procedures and environmental protection practices</p> <p>4.5 Complete operator maintenance tasks according to manufacturer recommendations and workplace procedures</p> <p>4.6 Record and report production outcomes and equipment faults to appropriate personnel</p>

Foundation Skills	
<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>	
Skill	Description
Reading	<ul style="list-style-type: none"> Read standard operating procedures and/or manufacturer instructions for the operation of infield wood chipping machines
Writing	<ul style="list-style-type: none"> Record operation, production and machine maintenance on paper-based or electronic media
Numeracy	<ul style="list-style-type: none"> Interpret numerical and graphical information shown on machine screens, displays and gauges relevant to safe machine operation

Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
FWPHAR3XXX Operate split flail and wood chipper fed by excavator with log grapple	FWPHAR3215 Operate a heavy production mobile chipper	This unit and FWPHAR3XXX replace FWPHAR3215 to provide for specific skills required to operate specialised in-field wood chipping equipment	No equivalent unit

Links	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47
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TITLE	Assessment requirements for FWPXXXXXX Operate split flail and wood chipper fed by excavator with log grapple
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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:

- planned, prepared and safely and effectively operated a split flail and wood chipper fed by an excavator with log grapple on four separate occasions in an infield wood chipping operation according to a work order or work instructions
- carried out routine machine maintenance on two occasions.

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 and site safety and environmental management plans
- hazardous or safe working zones in infield wood chipping operations
- health and workplace hazards or risks related to operating a split flail and wood chipper fed by an excavator with log grapple and factors that can change or introduce new hazards
- 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 split flail and wood chipper fed by an excavator with log grapple operations as outlined in workplace procedures and production plan
- warning signs, their correct positioning, vehicle-to-vehicle communication systems and procedures to maintain communication and workplace safety during infield wood chipping operations
- required emergency response procedure including firefighting resources and emergency response
- potential impacts of infield wood chipping operations on onsite and offsite environmental values including cultural heritage, flora, fauna, ground compaction, water contamination and soil erosion
- environmental control measures, restrictions, legal obligations of the current Environment Protection Acts and regulations and requirements of industry standards and codes of practice for infield wood chipping as outlined in workplace procedures and production plan
- 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 and slopes and methods to shut down the machine as outlined in workplace procedures or operator manual
- methods to conduct machine pre-operational checks and detect faults as outlined in workplace procedures or operator manual
- machine maintenance and servicing requirements as outlined in user or operator manuals
- reporting requirements regarding site, incident and hazard, personal reporting, check-in, production, and machine maintenance
- woodchip specifications
- features of split flail and wood chipper:
 - static/mobile
 - chains, knives and anvils
 - machine components
 - machine capacity
 - machine preparation and positioning
- terrain characteristics and impact on machine setting up and operation
- reasons and procedures for flail and chipper maintenance
- procedures for loading chips into truck for transport
- mass and load covering requirements of transport vehicles
- techniques for determining and optimising feed rate
- influences on feed rate for flail/chipper:
 - machine capacity
 - type and condition of timber
 - product type and quality requirements

Knowledge Evidence	
<ul style="list-style-type: none"> loading capacity of transport vehicles procedures for operating excavator with log grapple to load flail/chipper 	
Assessment Conditions	
<p>Assessment of the skills in this unit of competency must take place under the following conditions:</p> <ul style="list-style-type: none"> physical conditions: <ul style="list-style-type: none"> skills must be demonstrated in an infield wood chipping setting resources, equipment and materials: <ul style="list-style-type: none"> split flail and wood chipper excavator with log grapple whole trees and logs to be chipped personal protective equipment required in infield wood chipping operations vehicle-to-vehicle communication system truck to load specifications: <ul style="list-style-type: none"> access to work order or instruction detailing infield wood chipping activities to be carried out by operator 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 infield wood chipping operations access to workplace policies and procedures which cover current Environment Protection Acts, regulations and related industry standards and codes of practice applicable to infield wood chipping operations access to production plan access to workplace safety and environmental protection plans access to site emergency procedure access to workplace safe operating procedures for split flail and wood chipper and excavator with log grapple or operator manual access to user manual for vehicle-to-vehicle communication system. <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
Links	Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47