Modification history

| Release | Comments |
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| Release 1 | This version released with FWP Forest and Wood Products Training Package Version 2.1. |

| FWPHAR3228 | Operate loader |
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| Application | This unit of competency describes the skills and knowledge required to operate an articulated front-end wheel loader for log production and use optimised production processes in a commercial forest-harvesting environment. The main job functions are to load log trucks and/or sort log stacks at roadside or landing area for transportation, by ensuring a safe and optimal extraction for further processing. Other functions include slash removal.  The unit applies to individuals who work as loader operators in small or larger harvesting crews. Operators generally work under broad direction to complete routine activities related to crawler tractor operations and take responsibility for their work.  Work health and safety legislation and environment protection legislation applies to workers in the forest harvesting industry. Requirements vary between state and territory jurisdictions. Users are advised to check with the relevant authority |
| Prerequisite Unit | Nil |
| Unit Sector | Harvesting (HAR) |

| Elements | Performance Criteria |
| --- | --- |
| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Plan and prepare for operation | 1.1 Confirm, identify and report health, safety, environmental and heritage risks of operation, in line with standard operating procedures and site safety management plan  1.2 Apply risk control measures and emergency procedures, in line with standard operating procedures, site operational plan, legislative requirements and industry standards, to eliminate or minimise risks  1.3 Use production plan to identify layout of landing, or roadside area, and access to logs for efficient process and minimum interference with other forestry operations  1.4 Assess terrain characteristics to establish machine stability  1.5 Confirm type, size and quantity of logs or slash to be clamped, to ensure that loads and machine are in line with safe working requirements and industry standards for operations  1.6 Confirm production plan targets for felling and processing and assess wood flow requirements, to ensure efficient machine operations and overall productivity  1.7 Carry out pre-operational checks on machine, in line with organisational procedures or manufacturer's recommendations, to ensure optimal production performance and operational effectiveness |
| 2. Operate loader to load log trucks and/or sort log stacks | 2.1 Use industry-accepted warning signs, vehicle-to-vehicle communication systems and procedures to maintain communication and workplace safety during operation  2.2 Position loader for stability and safe access to logs/slash, by adjusting the technique in response to terrain conditions  2.3 Use machine cabin controls to clamp bunches of logs/slash, and load trucks and/or sort stacks, while ensuring that the bunch size is suited to the log clamp capacity and terrain conditions  2.4 Systematically load trucks and/or construct log/slash stacks, by using handling techniques to avoid log damage, in line with the production plan requirements, and ensure safety and stability of truck and/or stacks  2.5 Use appropriate techniques to maintain log product separation in the truck, when multiple product grades are loaded or in line with the production plan requirements  2.6 Drive the machine and manoeuvre log clamp safely and efficiently, to avoid logs, machine and environment damage, in line with the production plan requirements  2.7 Ensure all merchantable product and/or slash from the site is loaded, or sorted, in line with the production plan requirements |
| 3. Segregate and stack stems and/or logs | 3.1 Visually assess and measure products for size, species and quality characteristics, at the felling site and during staking at the roadside or landing bay, to ensure they are placed in the appropriate stack 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 stacks of stems or logs to avoid product damage, provide stability, restrict height for efficient extraction and facilitate safe access and conduct of other landing and machine operations, in line with worksite layout and production plan requirements  3.4 Maintain stack separation and identification to ensure products are correctly presented on roadside and/or landing bay for an optimum transport and logistics cycle time, in line with industry standards and production plan requirements,  3.5 Clean area of all debris resulting from loader operation, in line with resource management policies |
| 4. Carry out machine operator maintenance | 4.1 Park, shut-down, de-energise and isolate loader, in line with organisational procedures or manufacturer’s recommendations  4.2 Clean, check and carry out routine maintenance tasks on loader, to maintain optimum operational performance  4.3 Identify and report machine faults, malfunctions or problems, in line with organisational procedures or manufacturer's recommendations  4.4 Clean work area and dispose of, or recycle, waste materials, in line with site environmental management plan  4.5 Record loader 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. | |
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| Skill | Description |
| Learning | * develop knowledge of log species, quality characteristics, defects and product uses |
| Reading | * interpret production plans, site safety and environmental management plans in a forest harvesting environment * interpret 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 machine operations |
| Numeracy | * interpret gauges relevant to safe operation of harvesting machinery * determine construction of stable log stack * estimate the weight logs to determine loading requirements and compliance to machine specifications |
| Navigate the world of work | * identify and describe own skills, knowledge and experience within context of job role * understand main tasks, responsibilities and boundaries of own role * operate loaderaccording to site standard operating procedures, relevant to own responsibilities |
| Interact with others | * use appropriate vocabulary, including technical language directly relevant to role * 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 | * identify and resolve equipment issues and faults * recognise and respond to routine problems * take responsibility for planning, sequencing and prioritising tasks and own workload for efficiency and effective outcomes |

| Unit Mapping Information | | | |
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| Code and title current version | Code and title previous version | Comments | Equivalence status |
| FWPHAR3228 Operate loader | FWPHAR3218 Conduct loader operations | Optimisation processes and practices included | No equivalent unit |

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| Links | Companion Volume Implementation Guides are found in VETNet - <https://vetnet.education.gov.au/Pages/TrainingPackages.aspx/Pages/Home.aspx> |

| TITLE | Assessment requirements for FWPHAR3228 Operate loader |
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| Performance Evidence | |
| An individual demonstrating competency must satisfy all the elements, performance criteria and foundation skills of this unit. There must be evidence that, on at least one occasion, the individual has:  planned, prepared and safely and effectively operated loader, to load log trucks, sort and stack logs   * planned, prepared and safely and effectively operated loader, to load logs/slash on trucks and/or sort and stack logs, in line with a production plan * checked risks associated to the operation and applied standard operating procedures * followed the production plan requirements and site safety and environmental management plan * determined suitability and stability of the machine for operation, by considering machine specifications, terrain characteristics and type and size of logs to be clamped * adjusted machine positioning technique in response to terrain conditions * demonstrated knowledge of log species, quality characteristics and defects, in line with the production plan requirements * applied machine techniques to drive, clamp, load and/or stack logs or slash and minimise damage to products, machine and surrounding environment in line with the production plan requirements * placed, stacked and presented products for efficient transportation and identification, in line with the production plan requirements * shut down, de-energised and isolated machine in line with organisational procedures and operator’s manual * carried out routine maintenance on the machine. | |

| Knowledge Evidence |
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| 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:   * typical information and requirements contained in a production plan and site safety and environmental management plan * hazardous or safe working zones in forest harvesting operations * health and operational hazards or risks related to loader 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 loader operations, as outlined in organisational 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 operations * potential impacts of loader 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 loader operations, as outlined in organisational procedures and production plan * landings usage * wood flow requirements and extraction and production bottlenecks particular to a production system * log species, quality characteristics and defects particular to the site and production system * regional quality requirements for log products with particular end uses, markets and values * maximum log damage or defect and minimum quality allowances particular to a production system * techniques particular to a production system to avoid mechanical damage to logs during grappling, loading and stacking; and separate and present logs for efficient transportation and identification of the product * effects of weather on ground conditions * effects of 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 and methods to shut down, de-energise and isolate the machine, as outlined in organisational procedures or operator’s manual * using machine cabin controls * techniques for safe and efficient driving of the machine during operation * methods to conduct machine pre-operational checks and detect faults, as outlined in organisational procedures or operator’s manual * location of machine’s major mechanical systems and energy * firefighting equipment requirements * machine maintenance and servicing requirements, as outlined in organisational procedures or operator’s manual * industry-accepted reporting requirements regarding site, incident and hazard, personal reporting, check-in, production, machine maintenance, block completion. |

| Assessment Conditions |
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| Assessment of this unit of competency 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: * loader * logs/slash for loading and/or segregation and stacking * personal protective equipment required in harvesting operations * vehicle-to-vehicle communication system * specifications: * access to organisational policies and procedures which cover off on 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 organisational 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, operational plan and safety and environmental management plans * access to site emergency procedure * access to organisational standard operating procedures for loader 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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