



Australian Government

Department of Education, Employment and Workplace Relations

FPIHAR3206C Conduct forwarder operations

Release: 1

FPIHAR3206C Conduct forwarder operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to segregate, stack, transport, load and unload logs with a forwarder. Other functions may include loading and unloading of other materials

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3206B Conduct forwarder operations

Application of the Unit

Application of the unit

The unit involves conducting forwarder operations in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

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. Plan and prepare for <i>forwarder</i> operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to conducting forwarder operations are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4. Type and quantity of material to be moved with a forwarder is assessed and prepared</p> <p>1.5. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.6. Forwarder operations are assessed for <i>safe working conditions</i> and planned in line with site procedures and <i>environmental and heritage concerns</i></p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Operate forwarder	<p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p> <p>2.2. <i>Pre start-up checks</i> are carried out on equipment in line with manufacturer's recommendations and site requirements</p> <p>2.3. Forwarder controls and <i>functions</i>, including implements or other attachments, brakes and manoeuvrability are checked for serviceability and any faults are rectified or reported</p> <p>2.4. Forwarder is manoeuvred to maximise efficiency and ensure safety of other equipment and personnel</p> <p>2.5. Forwarder performance is monitored utilising appropriate indicators to aid efficient operations</p> <p>2.6. Site <i>hazards</i> associated with forwarder operations are detected and safe operating techniques are used to minimise risk</p> <p>2.7. Operating techniques for the forwarder are within recommended <i>capacities</i> and limitations in line with manufacturer's design specifications</p> <p>2.8. Forwarder is operated to work instructions in line with site operating procedures and <i>site conditions</i></p> <p>2.9. <i>Emergency plan procedures</i> are followed <i>in</i> line</p>

ELEMENT**PERFORMANCE CRITERIA**

with OHS, environmental, legal and site requirements

- | | |
|---|--|
| 3. Segregate and stack logs | 3.1. Planned landing layout and log handling procedures are identified from site and work order instructions and checked with appropriate personnel
3.2. Stacks are located to ensure appropriate space for access by site equipment and the safe conduct of other landing operations
3.3. Log stacks are positioned and <i>maintained</i> in line with planned layout and site requirements
3.4. Log stacks are constructed to provide stability and minimise problems from slippage and falling of logs
3.5. Logs delivered to landing are <i>visually assessed</i> and directed/moved to appropriate location for further processing or stacking |
| 4. Load, transport and unload logs | 4.1. Forwarder is positioned for safe access to logs within equipment load reach and movement limits in line with manufacturer's recommendations
4.2. Log weight is <i>estimated</i> and individual logs are selected and segregated by size and grade
4.3. Logs unable to be determined for size or grade by own personal skill are marked and reported to appropriate personnel
4.4. Logs are systematically <i>lifted</i> and placed in line with recommended equipment operating procedures to achieve optimum log shape
4.5. <i>Placement</i> of logs meets positioning and stability requirements and loads are safely and efficiently transported over planned route |
| 5. Carry out machine operator maintenance | 5.1. Forwarder is safely parked, shut-down and prepared for maintenance in line with manufacturer's manual and organisational requirements
5.2. <i>Visual inspection and fault finding</i> processes are conducted in line with manufacturer's recommendations and organisational requirements
5.3. Defective parts are removed and replaced safely and effectively in line with manufacturer's manual and organisational requirements
5.4. <i>Routine operational servicing</i> is conducted in line with manufacturer's and organisational requirements
5.5. Work area is cleared and waste materials are disposed of or recycled in line with site |

ELEMENT**PERFORMANCE CRITERIA**

- environmental management plan
- 5.6. Plant, tools and equipment are *cleaned*, checked, maintained and stored in line with manufacturer's recommendations and standard work practices
- 5.7. Forwarder operational *records and reports* are completed accurately and processed in line with site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment and efficiently and safely use forwarder to segregate, stack, transport, load and unload logs
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to locate, interpret and apply relevant information in written, diagrammatic and/or oral form including plans, reports, maps, specifications; accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures, interpret ground conditions and identify hazards

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for conducting forwarder operations including emergency and isolation procedures
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for conducting forwarder operations
- Forwarder operations and operating techniques including lifting procedures
- Technical capability and limitations of forwarder and attachments

REQUIRED SKILLS AND KNOWLEDGE

- Established communication channels and protocols
- Problem identification and resolution strategies
- Types of tools and equipment and procedures for their safe use and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

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

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct forwarder operations in line with organisational requirements

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

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to conducting forwarder operations
- following organisational policies and procedures relevant to conducting forwarder operations
- communicating effectively and working safely with others in the work area
- planning, preparing and conducting forwarder operations including segregating and stacking logs, and loading, transporting and unloading logs in line with site requirements
- carrying out authorised operator maintenance

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

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.

RANGE STATEMENT

Forwarders

may be wheeled or half track and attachments
may include blades

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility

RANGE STATEMENT

- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Environmental protection measures

may include action to limit the impact to:

- ground growth and canopy
- soil and water

may include action to limit the impact of:

- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- ground hazards
- obstacles

Work order is to include:

- instructions for the operation of a forwarder and its respective tasks including logs to be handled

and may include:

- information about log placement and access requirements, loading regulations and site operating plans
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

RANGE STATEMENT

Safe working conditions**is to ensure:**

- minimal equipment and log movement during forwarder operations
- control of risks and hazards

Environmental and heritage concerns may include:

- dust
- noise
- water
- flora and fauna
- heritage legislation
- culturally sensitive sites and artefacts
- plantations
- native forest

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

Pre start-up checks

are specified by the manufacturer prior to operating the equipment and may include:

- visual and audio warning devices and lights
- engine and stop engine lights
- fluid levels
- cab display instrumentation and gauges and on-board computer systems

and relate to start-up, park and shutdown procedures which may involve:

- safety mechanisms
- operational (horn, operating lights)
- correct location of equipment
- vehicle security

Functions must include:

- segregating, stacking, loading, transporting and unloading of logs

and may include:

- loading and unloading of other materials

Hazards may include:

- uneven/unstable terrain
- trees

RANGE STATEMENT

- fires
 - overhead and underground services
 - bridges
 - buildings
 - excavations
 - traffic
 - embankment
 - cuttings
 - structures and hazardous materials
- Capacities of equipment** may include:
- efficient and safe operating speed
 - duration of operation
 - type of activities performed
 - weight and/or load limitations
 - operating limitations
- Site conditions** may include:
- wet, dry
 - day, night
 - stability of ground
 - broken ground
 - slope of working surface
 - location of water table
- Emergency plan** may include:
- notification of authorities
 - evacuation procedures
 - isolation procedures
 - equipment shutdown procedures
 - clean up
 - first aid
 - use of personal protective equipment and clothing
 - guarding
 - access and exit
- Logs** may include:
- full range of species, size
 - conditions to be encountered in local harvesting operations
 - softwood or hardwood
- Maintenance** of log stacks includes providing for:
- anticipated stock levels
 - stock rotation requirements
 - size
 - segregation of lengths, species and grades
- Visual assessment** of logs includes identifying and
- species
 - diameter

RANGE STATEMENT

determining:

- length
- grade
- landing layout
- stock rotation requirements

Estimation

of log weight is used to determine lifting requirements and compliance to load plate

Lifting

may be conducted on a trial basis when an issue with load size or stability or other unacceptable operational situation is determined

Placement

of slipper or chocks is made as required to support or compress logs

Visual inspection and fault finding may include:

- vehicle number
- danger tags
- personnel proximity
- tyres and rim condition
- wheel nuts and studs
- light positioning and cleanliness
- radiator top up tank
- oil leaks, fuel leaks, water leaks
- no combustible material around exhaust
- damage to equipment
- portable fire extinguisher
- fire suppression system
- cab mounts
- windows
- engine oil to be checked before starting engine
- grease lines
- cab condition

Routine operational servicing may include:

- checking fluid levels
- greasing
- tightening loose fittings
- filter changing

Cleaning methods may include:

- water
- steam
- degreasing
- vacuum
- forced air

Records and reports may

- end of shift documentation

RANGE STATEMENT

include:

- work log
- supplies
- log
- computer readings

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Harvesting and Haulage