



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **FPIHAR3219A Conduct excavator operations with grabs**

**Release: 1**

## **FPIHAR3219A Conduct excavator operations with grabs**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit descriptor**

This unit describes the outcomes required to conduct excavator operations with grabs, including planning and preparation for work, the conduct of operational checks, the safe and effective operation of the excavator for a range of mandatory tasks, use of attachments and operator maintenance activities

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

This unit replaces FPIHAR320B Conduct excavator operations with grabs

### **Application of the Unit**

#### **Application of the unit**

The unit involves conducting excavator operations with grabs, 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 operation	<p>1.1. Applicable <b><i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i></b> relevant to conducting excavator operations with grabs are identified and followed</p> <p>1.2. Site <b><i>environmental protection measures</i></b> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <b><i>Work order</i></b> is reviewed and checked with <b><i>appropriate personnel</i></b></p> <p>1.4. Type and quantity of material to be moved with an <b><i>excavator</i></b> is assessed and prepared</p> <p>1.5. <b><i>Equipment</i></b> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.6. <b><i>Level and/or suitable surface for stability of equipment to be used is determined and confirmed</i></b></p> <p>1.7. Excavator operations are planned in line with site procedures and site <b><i>environmental and heritage concerns</i></b></p> <p>1.8. <b><i>Communication</i></b> with others is established and maintained in line with OHS requirements</p>
2. Operate excavator	<p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p> <p>2.2. <b><i>Pre start-up checks</i></b> are carried out on equipment in line with manufacturer's recommendations and site requirements</p> <p>2.3. Excavator controls and functions, including implements, brakes and manoeuvrability are checked for serviceability and any faults are rectified or reported</p> <p>2.4. Site <b><i>hazards</i></b> associated with excavator operations are detected and safe operating techniques are used to minimise risk</p> <p>2.5. Operating techniques for the excavator are applied to achieve optimum efficiency in line with manufacturer's design specifications</p> <p>2.6. Excavator is operated to work instructions in line with organisational operating procedures</p> <p>2.7. <b><i>Emergency plan procedures are followed in line with OHS, environmental, legal and site requirements</i></b></p>

ELEMENT	PERFORMANCE CRITERIA
3. Lift, carry and place materials	<p>3.1. Communication practices associated with transportation and lifting of materials are conducted in line with work site procedures and checked between parties</p> <p>3.2. <b>Weight of load</b> is established in line with operating procedures</p> <p>3.3. <b>Lifting gear</b> is selected, attached and used in line with safe working load requirements and OHS legislation</p> <p>3.4. Machinery is positioned ensuring <b>stability</b> and located to effectively shift materials in line with job specifications</p> <p>3.5. Load is shifted safely and effectively in line with industry safety standards and manufacturer's recommendations</p> <p>3.6. Load is moved in line with conventional hand and audible signals that meet OHS legislation and/or work site procedures</p>
4. Carry out machine operator maintenance	<p>4.1. Excavator is safely parked, prepared for maintenance and shut-down in line with manufacturer's manual and organisational requirements</p> <p>4.2. Inspection and fault finding are conducted in line with manufacturer's recommendations and organisational requirements</p> <p>4.3. Defective parts are removed and replaced safely and effectively in line with manufacturer's manual and organisational requirements</p> <p>4.4. Regular programmed maintenance tasks are carried out in line with manufacturer's and organisational requirements</p> <p>4.5. Work area is cleared and materials disposed of or recycled in line with site environmental management plan</p> <p>4.6. Plant, tools and equipment are cleaned, checked, maintained and stored in line with manufacturer's recommendations and standard work practices</p> <p>4.7. Excavator operational <b>records and reports</b> are completed accurately and processed in line with site procedures</p>

## 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; efficiently and safely operate an excavator
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to 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

#### 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 excavator operations with grabs
- 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 excavator operations with grabs
- Excavator operations and operating techniques
- Excavator capabilities
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- 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 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 excavator operations with grabs 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 excavator operations with grabs
- following organisational policies and procedures relevant to conducting excavator operations with grabs
- communicating and working safely with others in the work area
- conducting excavator operations with grabs in line with site requirements

### 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

### Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and

## EVIDENCE GUIDE

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.

**OHS requirements:** are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and



## RANGE STATEMENT

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
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards

**RANGE STATEMENT**

- 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

may include action to limit the impact of:

- soil and water
- 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 an excavator and its respective tasks

and may include:

- 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

**Excavator**

is a self-propelled tracked or wheeled machine with an upper structure capable of a minimum of 360° rotation which lifts, elevates, swings and discharges material by the action of attachments fitted to the boom and arm or telescoping boom, without moving the chassis or undercarriage during any part of the working cycle of the machine

## RANGE STATEMENT

**Equipment** may include:

- excavators and relevant maintenance equipment
- bucket
- forks
- grabs
- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine

**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 conducted to ensure:

- equipment has been set-up correctly
- plant is operating to optimum performance

**Hazards** may include:

- uneven/unstable terrain
- trees
- fires
- overhead and underground services
- bridges
- buildings
- excavations
- traffic
- embankments
- cuttings
- structures
- hazardous materials

**Emergency plan** may include:

- notification of authorities
- evacuation procedures

## RANGE STATEMENT

- isolation procedures
- equipment shut-down procedures
- clean up
- first aid
- use of personal protective equipment and clothing
- guarding
- access and egress

### Weight of load

is that prescribed by the manufacturer as not exceeding the allowable capacity of the excavator

### Lifting gear may include:

- slings
- cables
- grabs

### Stability

is to ensure the excavator is positioned and secured so as not to topple over during operations

### Tasks may include:

- lifting and moving materials
- tree removal
- stripping
- spreading materials
- stockpiling
- bulk excavation
- land clearing
- towing equipment
- working in tandem
- winching
- boxing
- constructing fire breaks

### Records and reports may include:

- end of shift documentation
- work log

and may be:

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

## Unit Sector(s)

Not Applicable

## **Competency field**

**Competency field**                      Harvesting and Haulage