



Australian Government

Department of Education, Employment and Workplace Relations

RIIUND301A Operate manual winder

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the operation of manual winder in the resources and infrastructure industries. It includes organising for winder operations, hauling personnel, hauling equipment/materials, carrying out winder inspections, and conducting end of shift activities. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Application of the Unit

This unit is appropriate for those working in an operational role at worksites within:

- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Organise for winder operations	1.1. Access, interpret and apply compliance documentation relevant to the work activity 1.2. Receive, interpret and clarify shift changeover details and take over control of winder 1.3. Select and use personal protective equipment 1.4. Perform equipment and work area pre-operational checks to ensure equipment is ready for operation 1.5. Check records for outstanding maintenance/inspections, record defects to establish the operational status of equipment and take action 1.6. Identify, address and report defects and potential hazards and risks 1.7. Carry out start-up procedures including checking that area is clear for operations 1.8. Manage relevant environmental issues 1.9. Adhere to emergency procedures 1.10. Apply dust suppression and extraction methods 1.11. Ensure control cabin is environmentally and ergonomically sound
2. Haul personnel	2.1. Communicate with relevant personnel 2.2. Confirm cage is ready for operations 2.3. Energise the system , follow start-up procedures and operate personnel cage to comply with directions from person in charge of cage 2.4. Monitor and manage cage performance using appropriate indicators 2.5. Adjust speed and movement as required 2.6. Carry out shutdown procedures
3. Haul equipment/ materials	3.1. Communicate with relevant personnel 3.2. Confirm cage/skip is ready for operation 3.3. Energise the system, follow start-up procedures and transport equipment using manual winder

	3.4. Adjust speed and movement as required 3.5. Monitor and manage cage and/or skip performance using appropriate indicators 3.6. Carry out shutdown procedures
4. Carry out winder inspections	4.1. Isolate and prove isolation of equipment 4.2. Inspect winder and auxiliary equipment and report faults/defects and prepare winder for routine servicing
5. Conduct end-of shift activities	5.1. Complete all required documentation 5.2. Pass on end-of-shift information and hand over control to oncoming shift 5.3. Ensure control room is clean and tidy

Required Skills and Knowledge

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

Required skills

Specific skills are required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes the ability to carry out the following as required to operate manual winder:

- apply legislative, organisation and site requirements and procedures for operation of manual winder
- operate shaft winders
- operate, maintain and clean equipment
- monitor shaft operations
- communicate and report
- monitor conveyances
- use hand tools

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following as required to operate manual winder:

- the key areas of mining acts and regulations
- the relevant key areas of legislated safety and health requirements pertaining to winding
- winder types, systems and operations
- shaft configuration and construction
- shaft services and installations (pipes, cables, ladders etc)
- possible defects in winder/winch equipment/installations
- identification of defects relevant to skip operations through inspection or observation
- daily/weekly/monthly inspection requirements and maintenance requirements and procedures for winding systems
- site winder emergency procedures
- recording and logging requirements for winder drivers, and electrical and mechanical maintenance personnel
- equipment safety requirements
- primary and secondary ventilation/mine ventilation system
- shaft installations
- site procedures
- in-shaft communications equipment

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	
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 worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for operation of manual winder • implementation of requirements, procedures and techniques for the safe, effective and efficient operation of manual winder • working with others to undertake and operate manual winder that meets all of the required outcomes • consistent timely operation of manual winder that safely, effectively and efficiently meets the required outcomes
Context of and specific resources for assessment	• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Assessment of this competency requires typical resources normally used in a resources and infrastructure sector environment. Selection and use of resources for particular worksites may differ due to the site circumstances. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment should sensitively accommodate

	cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods: • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: • implementation of appropriate requirements, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: • working with others to operate manual winder
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

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.

Relevant compliance documentation may include:	• legislation including Acts and regulation dealing with: • mining safety and health • mine inspection • OHS • explosives • organisational and site requirements and procedures including: • clean up • emergency procedures • equipment shutdown and isolation procedures • evacuation procedures • First Aid • notifying relevant authorities • permit-to-work systems • safety equipment • use of personal protective equipment • communication procedures (e.g. with platmen) • portable electric apparatus procedures • fall arrestor and harness procedures • confined spaces • manufacturer's guidelines and specifications • Australian standards • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Equipment may include:	• winding engine • bucket/kibbles • cage/working platforms including chinaman's protective top cover • skip

	• power supplies and equipment
Pre-operational checks may include:	• external damage/defects/wear • computer systems • communications systems • winder controls • protection and emergency devices • fire suppression systems • danger/out of service tags • display instrumentation and gauges (indicators, gauges, laser levels) • lubricant/hydraulic/coolant levels • idle positioned and running • light positioning and cleanliness • personal proximity • skip/cage doors • ropes • visual and audio warning devices and lights • weigh machines • head frame/sky shaft • shaft brace
Potential hazards and risks may include:	• communication failure • falling objects • explosives • moving equipment • collisions • plant failure • electricity • spillage • hazardous substances • unauthorised personnel • visibility • vibration • noise • explosion • asphyxiation and drowning
Start-up procedures may include:	• pre-start inspections, checks and tests • setting winding mode • advisory signals indicating impending movement of conveyance • carrying out test-winding-cycle if required • checking that equipment/system operations are normal

Environmental issues may include:	• dust • fumes • noise • water • heat • flammable and noxious gases • flammable dust
Dust suppression and extraction methods may include:	• mobile/fixed sprays • manual watering down site
Energise the system may involve:	• activate power supply or start diesel motor-generator • running up hydraulic/pneumatic and other auxiliary equipment • check fault indicators
Monitor and manage cage performance may include:	• duration of operation • efficient and safe operating speed • operating limitations • type of activities performed • weight and/or load limitations
Shutdown procedures may include:	• de-activating power/stopping diesel prime mover • shutting down motor-generator set/excitors/exhaust and cooling fans/hydraulic drive • shutting down hydraulic/pneumatic & other auxiliary equipment
Auxiliary equipment may include:	• emergency power supplies • general mine services • emergency communications systems
Clean may include:	• degreasing • forced air • steam cleaning • vacuum • water • solvents • rags and cotton waste
Winding operations include:	• winder operations in drifts, tunnels, slopes or inclines

Unit Sector(s)

Underground Mining

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.