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|---------------------------------|-------------------------------|---|---|---|
| Skills Programme | | |  | |
| Curriculum Code | Curriculum Title | | | |
| 900169-000-00-00 | Gathering Arm Loader Operator | | | |
| Quality Partner (QP) | Name | Website Address | Telephone Number | Logo |
| Mining Qualifications Authority | Jeannette De Leeuw | https://mqa.org.za/ | 011 547 2600 |  |

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 - 1.4.2. Activities are completed; and procedures complied with; in accordance with requirements
 - 1.4.3. Continuous risk assessment is completed in accordance with requirements
 - 1.4.4. Emergency preparedness and response is completed, in accordance with requirements
- 1.5. Exemptions
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 - 2.2. Guidelines for Practical Skills
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 - 2.2.2. PM-02-PS02 Observe and explain the operation of the machine
 - 2.2.3. PM-02-PS03 Perform pre-operational checks
 - 2.2.4. PM-03-PS04 Start-up and shut-down the machine
 - 2.3. Provider Programme Accreditation Criteria
 - 2.3.1. Physical Requirements**
 - 2.3.2. Human Resource Requirements**
 - 2.3.3. Legal Requirements**
 - 2.4. Critical Practical Activities to be Assessed Externally
 - 2.4.1. Inspections are completed; including check-lists, as required, in accordance with requirements
 - 2.4.2. Activities are completed; and procedures complied with; in accordance with requirements
 - 2.4.3. Continuous risk assessment is completed in accordance with requirements
 - 2.4.4. Emergency preparedness and response is completed, in accordance with requirements
 - 2.5. Exemptions
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 - 3.3.3. Legal Requirements**
 - 3.4. Critical Practical Activities to be Assessed Externally

- 3.4.1. Inspections are completed; including check-lists, as required, in accordance with requirements
- 3.4.2. Activities are completed; and procedures complied with; in accordance with requirements
- 3.4.3. Continuous risk assessment is completed in accordance with requirements
- 3.4.4. Emergency preparedness and response is completed, in accordance with requirements
- 3.5. Exemptions

SECTION 1 CURRICULUM SUMMARY

1.1. Occupational Information

1.1.1. Associated Occupation Code and Title

711101 Gathering Arm Loader Operator

1.1.2. Skills Programme code and title

900169-000-00-00 Mining Operator

1.1.3. Alternative Titles

Gathering Arm Loader Operator

1.2. Curriculum Information

1.2.1. Curriculum Structure

NQF Level: 2

Credits: 28

1.2.2. Relation of this Curriculum for progression

Progression may be to Miner, then Shift Supervisor

1.3. Curriculum Structure

1.3.1. Knowledge Modules

900155-000-00-KM-01 Workplace fundamentals, NQF Level 2, 4 Credits

900134-000-00-KM-01 Health, safety, and the environment, NQF Level 2, 4 Credits

900152-000-00-KM-01 Operations and machines, NQF Level 2, 4 Credits

900169-000-00-KM-01 Components, controls, and consumables, NQF Level 2, 4 Credits

Total Credits: **16**

1.3.2. Practical Skill Modules

900134-000-00-PM-01 Apply, exercise, and ensure safety, health and environmental measures and procedures, NQF Level 2, 4 Credits

900159-000-00-PM-01 Perform pre-operational activities, NQF Level 2, 4 Credits

900169-000-00-PM-01 Operate a gathering arm loader, NQF Level 2, Credits 4

Total Credits: 12

1.4. Entry Requirements

Open access.

1.1. Recognition of Prior Learning (RPL)

RPL for access to the external integrated summative assessment: Accredited providers and approved workplaces must apply the internal assessment criteria specified in the related

curriculum document to establish and confirm prior learning. Accredited providers and workplaces must confirm prior learning by issuing a statement of result or certifying a work experience record.

RPL for access to the qualification: Accredited providers and approved workplaces may recognise prior learning against the relevant access requirements

1.2. Quality Partner for Assessment

Originator/Development Quality Partner (DQP): Mining Qualifications Authority

Originating Provider/Assessment Quality Partner (AQP): Mining Qualifications Authority

Name of body: Mining Qualifications Authority

Address of body: 7 Anerley Road, Parktown 2198

Website details: <https://mqa.org.za/>

SECTION 2: OCCUPATIONAL PROFILE

2. Occupational Purpose

The purpose of this qualification is to prepare a learner to operate as a Gathering Arm Loader Operator

A Gathering Arm Loader Operator operates a machine to load loose rock or coal for underground coal mining operations. The qualifying learner will know the function and operating requirements for the machine; applying, exercising, and complying with safety, health, and environmental requirements, in accordance with statutory, regulatory, and organisational procedures, policies, codes of practice, standards and agreements.

A qualified learner will be able to:

- Apply, exercise, and ensure safety, health and environmental measures and procedures
- Operate a gathering arm loader

3. Occupational Tasks

- Apply, exercise, and ensure safety, health and environmental measures and procedures (NQF Level 3)
- Operate the machine (NQF Level 3)

4. Occupational Task Details

4.1. Apply, exercise, and ensure safety, health and environmental measures and procedures (NQF Level 3)

Unique Product or Service

- Safety, health and environmental measures and procedures are applied and exercised

Occupational Responsibilities

- i. Apply, exercise, and ensure safety, health and environmental measures and responsibilities, in accordance with operating requirements
- ii. Deal with ground and strata conditions, in accordance with operating requirements

Occupational Contexts

- Mining operations

4.2. Operate the machine (NQF Level 3)

Unique Product or Service

- Machine operated

Occupational Responsibilities

- i. Perform pre-operational activities
- ii. Operate the machine

Occupational Contexts

- Mining operations

SECTION 3 CURRICULUM SPECIFICATIONS

SECTION 3A KNOWLEDGE MODULE SPECIFICATIONS

List of Knowledge.

- 900155-000-00-KM-01 Workplace fundamentals NQF Level 2 Credits 4
- 900134-000-00-KM-01 Health, safety, and the environment NQF Level 2 Credits 4
- 900152-000-00-KM-01 Operations and machines NQF Level 2 Credits 4
- 900169-000-00-KM-01 Components, controls, and consumables NQF Level 2 Credits 4

1. 900155-000-00-KM-01, Workplace fundamentals, NQF Level 2, Credits 4

1.1. Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of the basic concepts which underlie the workplace context, the regulatory environment and the explicit and tacit rules which govern the workplace.

The learning will enable learners to demonstrate an understanding of:

- KM-01-KT01 Employment (15%)
- KM-01-KT02 Organisation of work (15%)
- KM-01-KT03 Employer-Employee relationships (15%)
- KM-01-KT04 Concepts related to the performance of work (15%)
- KM-01-KT05 Ethics at work (10%)
- KM-01-KT06 Current trends influencing work (10%)
- KM-01-KT07 Effective communication to enhance safety and productivity (15%)

1.2. Guidelines for Topics

1.2.1. KM-01-KT01: Employment (15%)

Topic elements to be covered include:

- KT0101 An employee's legal rights
- KT0102 Legislation which governs employers, employees, construction, and mining, as applicable
- KT0103 Employer roles and responsibilities
- KT0104 Employee role and responsibilities
- KT0105 Role of organised labour in business, structures, and processes

Internal Assessment Criteria

- IAC0101 Define and describe the concepts which underpin employment, employment related legislation and systems
- IAC0102 Discuss the impact of these concepts on an employer and employee
- IAC0103 Describe process which govern employment, disputes, and other labour relations issues

1.2.2. KM-01-KT02: Organisation of work (15%)

Topic elements to be covered include:

- KT0201 What is work, including products and services, paid and unpaid
- KT0202 Work as sets of value-adding processes

- KT0203 The value chain in the construction and mining sectors, as applicable
- KT0204 Work as collaboration - the role of teams in work processes
- KT0205 How teams function
- KT0206 Team organisation, team roles, meetings, and information flow
- KT0207 Meeting protocols for a variety of meeting types, including formal meetings and informal "stand-up" meetings
- KT0208 Organisational structures and functions, including departments, services, and inter-departmental relationships

Internal Assessment Criteria

- IAC0201 Define and describe the concepts which underpin work, working and working relationships
- IAC0202 Discuss the impact of these concepts on an employee and co-workers
- IAC0203 Describe process which govern work in the workplace

1.2.3. KM-01-KT03: Employer-Employee relationships (15%)

Topic elements to be covered include:

- KT0301 Employment contracts including learning contracts such as learnerships, learning programmes, apprenticeships, and internships
- KT0302 Mandates, vision, mission, policies, and procedures
- KT0303 Rules, codes of conduct and ethics
- KT0304 Organisation values, common and specific
- KT0305 Labour relations processes including, discipline, grievance, strikes, lock outs, negotiation, conciliation, mediation, and arbitration

Internal Assessment Criteria

- IAC0301 Define and describe the concepts which define employer and employee relationships
- IAC0302 Discuss the impact of these concepts on an employer and employee
- IAC0303 Describe process which govern employer-employee relationships

1.2.4. KM-01-KT04: Concepts related to the performance of work (15%)

Topic elements to be covered include:

- KT0401 Planning, organising and control
- KT0402 Work flow
- KT0403 Cost, waste
- KT0404 Productivity, efficiency

- KT0405 Housekeeping
- KT0406 Risk, health, safety, environment, and related systems
- KT0407 Quality and quality systems
- KT0408 Continual improvement

Internal Assessment Criteria

- IAC0401 Define and describe the concepts related to the performance of work
- IAC0402 Discuss the impact of these concepts on the individual employee
- IAC0403 Describe processes which govern performance of work

1.2.5. KM-01-KT05: Ethics at work (10%)

Topic elements to be covered include:

- KT0501 Definition of ethical behaviour
- KT0502 Components of ethical behaviour, including integrity, honesty, fair dealing, respecting diversity
- KT0503 Unwritten but expected behaviours including, reliability, accountability, time keeping, respect for others
- KT0504 Lapses in ethical behaviour, including sexual harassment, racism, bullying, theft, abuse of company property, rules, time and sick leave
- KT0505 Conflicts of interest, including primary and secondary interests the impact on individuals and organisations and the link to corruption
- KT0506 The need for ethical behaviour and the impact on consequences of lapses in unethical behaviour

Internal Assessment Criteria

- IAC0501 Define and describe the concepts, issues, and examples of ethical and unethical conduct
- IAC0502 Discuss the impact of these factors on an employer and employee
- IAC0503 Describe the impact of lapses in ethical behaviour on the organisation and individuals in the organisations
- IAC0504 Describe the processes which employer organisations use to support ethical conduct in the workplace

1.2.6. KM-01-KT06: Current trends influencing work (10%)

Topic elements to be covered include:

- KT0601 Employment equity
- KT0602 Broad-Based Black Economic Empowerment
- KT0603 Sustainability

- KT0604 Diversity
- KT0605 Work-life balance
- KT0606 Working smart

Internal Assessment Criteria

- IAC0601 Describe and explain the current trends affecting organisations and employees
- IAC0602 Discuss the impact of these factors on an employer and employee

1.2.7. KM-01-KT07: Effective communication to enhance safety and productivity (15%)

Topic elements to be covered include:

- KT0701 Effective communication and identifying the barriers that could prevent communication from being effective
- KT0702 Practical steps that can be taken to improve the effectiveness of communication
- KT0703 Applications of communication, instructions, feedback, reporting, problem solving, use of meetings to communicate, and the use of notice boards and written communication

Internal Assessment Criteria

- IAC0701 Given descriptions of various situations where communication is required learners will be able to identify the barriers to poor communication in each of the situations, explain what can be done to improve the communication indicating the potential consequences of inefficient communication and give examples of how the operator can improve the communication situation.

1.3. Provider Programme Accreditation Criteria

1.3.1. Physical Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| <p>Equipment & Tools</p> <ul style="list-style-type: none"> • Skills Development Providers will be ISO9000:2015, Quality Management, Certified. • Training/facilitation resources, including fully equipped classroom and gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. • Assessment tools/instruments. • Relevant learning material. | <p>Equipment & Tools</p> <ul style="list-style-type: none"> • Assessment resources, including gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. • Assessment tools/instruments. |
| <p>Consumables</p> | <p>Consumables</p> |

| | |
|---|---|
| <ul style="list-style-type: none"> OSHE and gathering arm loader related consumables | <ul style="list-style-type: none"> OSHE and gathering arm loader consumables |
|---|---|

1.3.2. Human Resource Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. | <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. |

1.3.3. Legal Requirements

| Skills Development Providers | Assessment Centres |
|---|---|
| <ul style="list-style-type: none"> Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> Occupational Health and Safety Act 85 of 1993 Mine Health and Safety Act 29 of 1996 Labour Relations Act 66 of 1995 The Basic Conditions of Employment Act 75 of 1997 | <ul style="list-style-type: none"> Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> Occupational Health and Safety Act 85 of 1993 Mine Health and Safety Act 29 of 1996 Labour Relations Act 66 of 1995 The Basic Conditions of Employment Act 75 of 1997 |

1.4. Critical Topics to be Assessed Externally for the Knowledge Module

None

2. 900134-000-00-KM-01, Health, safety, and the environment, NQF Level 2, Credits 4

2.1. Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of the basic principles relating to health, safety, and the environment

The learning will enable learners to demonstrate an understanding of:

- KM-02-KT01 Health (30%)
- KM-02-KT02 Safety (30%)
- KM-02-KT03 Occupational environments (40%)

2.2. Guidelines for Topics

2.2.1. KM-02-KT01 Health (30%)

Topic elements to be covered include

- KT0101 Medical surveillance
- KT0102 Employee wellness programmes

KT0103 Employee assistance programmes

- KT0104 Hygiene
- KT0105 Contraband; substance abuse, including impact on work
- KT0106 Ergonomic Principles
- KT0107 Diseases and disease control

Internal Assessment Criteria

- IAC0101 Describe the principles underpinning health programmes
- IAC0102 Describe the impact of substance abuse

2.2.2. KM-02-KT02 Safety (30%)

Topic elements to be covered include

- KT0201 Pre- and start -of-shift procedures, including time and attendance, schedules, access procedures, lamproom procedures, examination, and signature of flammable gas measuring instruments; as applicable
- KT0202 Statutory and regulatory requirements, and compliance related to safety; employees' rights and duties; safety representatives and a health and safety committee; employers' rights and duties; permissions; appointments and reporting
- KT0203 Basic principles of and compliance to organisational agreements procedures, policies, codes of practice and standards
- KT0204 Personal protective equipment; available, fit for purpose, in good working order and use in accordance with specified requirements; which may include hard hat, gloves,

hearing protection, eye protection, foot protection, self-contained rescuer, knee guards, seat protector, elbow guards, respirator/ mask and proximity safety devices

- KT0205 Interaction between man and machine, machine, and machine in close proximity, including proximity safety devices and proximity detection systems (PDS)
- KT0206 Towing of machines, as applicable
- KT0207 Travel, personnel carriers/ conveyances, travelling ways and routes; which may include queuing, entering, and leaving personnel carriers/ carriages and conduct inside personnel carriers/ conveyances; and may include boarding/ alighting conveyors and chairlifts
- KT0208 Role and purpose of self-rescuers, as applicable
- KT0209 Emergency preparedness and response; and evacuation procedures including assembly points and refuge bays, as applicable; emergencies may include seismic events, flooding, fires, power failures, accidents to persons and accident to infrastructure, plant, machines, and equipment
- KT0210 Plugging leaks or inundation; and measures used to determine the quantity of the leak
- KT0211 Role and purpose of mines rescue services and rescue drilling unit
- KT0212 Fires, causes and effects; sources of fire, including electrical, friction, blasting, cutting, and welding, smoking or contraband, diesel engines and fuel, flammable fluid, or greases; plastic or other similar materials, methane or other gas explosions, impact generating sparks; hot work familiarisation and gas testing; fire prevention; fire-fighting equipment availability and placement
- KT0213 Heat, including heat exhaustion and heat stroke; sources of heat
- KT0214 Fatigue, including causes and effects
- KT0215 Concepts and principles of hazard identification and risk assessment, including electrical, mechanical, and environmental hazards
- KT0216 Natural hazards, such as snakes or lightning, as applicable

Internal Assessment Criteria

- IAC0201 Describe the relevant statutory, regulatory, and organisational requirements
- IAC0202 Describe the various safety factors, hazards and risks and explain methods of elimination or mitigation
- IAC0203 Describe emergency and rescue procedures and processes

2.2.3. KM-02-KT03 Occupational environments (40%)

Topic elements to be covered include

- KT0301 Identifying basic geological rock types and structures; identifying mining induced ground conditions; which may include brows, bed separation, fracturing and loose rocks, as applicable; identifying strata formation from bore-hole log data, as applicable; falls of ground; the influence that the geological conditions have on the rock strata; hazards and risks related to geological conditions and mining induced ground conditions;

- KT0302 Strata control principles and methods, which may include jointing, faults, slips, dykes and sills, key blocks, bedding planes, earthquakes/ seismicity, safety factors, support systems, unsafe support, ground conditions and loose rocks, as applicable; dealing with geological conditions in terms of demarcation and support, which may include method, size and type, as applicable; the influence on strata control of the installation of pre-stressed support, as applicable; condition/ rock mass rating, as applicable; pre-conditioning, as applicable; measures to prevent or mitigate injuries, property damage and time delays; and consequences of inadequate strata control
- KT0303 Basic ventilation principles, as applicable
- KT0304 Air-borne pollutants, including health hazards and risks; inhalable and respirable pollutants; causes, remedies, and prevention
- KT0305 Water, water pressure, accumulation of water and inundation
- KT0306 Gases, including oxides of nitrogen, carbon dioxide, carbon monoxide, hydrogen, hydrogen sulphide, hydrocyanic acid, methane, nitrous fumes, and oxygen; sources, methods of detection and actions taken when encountered; as applicable
- KT0307 Basic principles of flame proofing, as applicable
- KT0308 Stored energy, causes, effects, de-energising, and isolation; including pipes under pressure
- KT0309 Stone dust, including legal requirements and application, as applicable
- KT0310 Noise, including hazards of excessive noise over 85 decibels
- KT0311 Dealing with low visibility
- KT0312 Illumination, including cap lamps, machine lighting, legal requirements
- KT0313 Oil and fuel, including leaks, spillages, storage, and impact on the environment
- KT0314 Working in confined spaces and confined areas, in steeply inclined areas, close to open excavations and over water of unknown depth
- KT0315 Vibration - causes, impact, and effects
- KT0316 Hazardous materials, including leaks, spillages, storage, accumulation of combustible material; and impact on the environment
- KT0317 Underfoot conditions - slip and fall
- KT0318 Working at heights; safety harnesses
- KT0319 Transport and machinery; man-machine interface; traffic management; moving machinery, guards and guarding
- KT0320 Electricity, electrical systems, and connections; exposure to unsafe electrical connections
- KT0321 Contraband

- KT0322 Signs and signage, including warning, mandatory, statutory, and informative signs
- KT0323 Entering prescribed areas, which may include barricaded and abandoned areas
- KT0324 Methods of hazard elimination and mitigation
- KT0324 Statutory and regulatory requirements

Internal Assessment Criteria

- IAC0301 Identify the basic geological rock types and structures
- IAC0302 Identify mining induced ground conditions,
- IAC0303 Identify strata formation from bore-hole log data, as applicable
- IAC0304 Identify and describe falls of ground
- IAC0305 Describe and explain the influence that the geological conditions have on the rock strata
- IAC0306 Describe and explain strata control principles and methods
- IAC0307 Describe and explain dealing with geological conditions in terms of demarcation and support, the influence on strata control of the installation of pre-stressed support, as applicable; and condition/ rock mass rating, as applicable
- IAC0308 Describe and explain the hazards and risks related to geological conditions and mining induced ground conditions; measures to prevent or mitigate injuries, property damage and time delays; and consequences of inadequate strata control
- IAC0310 Describe and explain the various applicable environmental elements, hazards, and risk assessment
- IAC0311 Describe and explain methods of elimination and mitigation

2.3. Provider Programme Accreditation Criteria

2.3.1. Physical Requirements

| Skills Development Providers | Assessment Centres |
|---|--|
| Equipment & Tools | Equipment & Tools |
| <ul style="list-style-type: none"> • Skills Development Providers will be ISO9000:2015, Quality Management, Certified. • Training/facilitation resources, including fully equipped classroom and gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. • Assessment tools/instruments. | <ul style="list-style-type: none"> • Assessment resources, including gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. • Assessment tools/instruments. |

| | |
|---|---|
| <ul style="list-style-type: none"> Relevant learning material. | |
| Consumables | Consumables |
| <ul style="list-style-type: none"> OSHE and gathering arm loader related consumables | <ul style="list-style-type: none"> OSHE and gathering arm loader consumables |

2.3.2. Human Resource Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. | <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. |

2.3.3. Legal Requirements

| Skills Development Providers | Assessment Centres |
|---|---|
| <ul style="list-style-type: none"> Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> Occupational Health and Safety Act 85 of 1993 Mine Health and Safety Act 29 of 1996 Labour Relations Act 66 of 1995 The Basic Conditions of Employment Act 75 of 1997 | <ul style="list-style-type: none"> Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> Occupational Health and Safety Act 85 of 1993 Mine Health and Safety Act 29 of 1996 Labour Relations Act 66 of 1995 The Basic Conditions of Employment Act 75 of 1997 |

2.4. Critical Topics to be Assessed Externally for the Knowledge Module

None

3. 900152-000-00-KM-01, Operations and machines, NQF Level 2, Credits 4

3.1. Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of the basic fundamentals operations and machines.

The learning will enable learners to demonstrate an understanding of:

- KM-03-KT01: Methods and processes (10%)
- KM-03-KT02: Machine operations (10%)
- KM-03-KT03: Machines (70%)
- KM-03-KT04: Explosives (10%)

3.2. Guidelines for Topics

3.2.1. KM-03-KT01: Methods and processes (10%)

Topic elements to be covered include:

- KT0101 Purpose, processes, and applications
- KT0102 Methods and processes.
- KT0103 The basic operating cycle, as applicable

Internal Assessment Criteria

- IAC0101 Describe various processes and methods and their impact on the environment

(Weight 10%)

3.2.2. KM-03-KT02: Machine operations (10%)

Topic elements to be covered include:

- KT0201 Types of machines, their operation, and applications
- KT0202 Role of the operator
- KT0203 Designated routes, travelling and haul ways and associated signage, routes, speeds, and roadway conditions
- KT0204 Precautions when travelling on inclines and declines and associated control systems such as signage, routes, speeds, and roadway conditions
- KT0205 Transportation of personnel and materials
- KT0206 Extraction operations, including drilling, cutting, and breaking

Internal Assessment Criteria

- IAC0201 Describe and explain various machine operations in the applicable work cycle

3.2.3. KM-03-KT03 Machines (70%)

Topic elements to be covered include:

- KT0301 Common types of machines, as applicable
- KT0302 Common processes and procedures, as applicable
- KT0303 Basic construction of machines, controls, and operational application
- KT0304 Operating limits and possible malfunction
- KT0304 Operating limitations
- KT0305 Cost of machines
- KT0306 Care and maintenance principles, including impact of downtime
- KT0307 Workplace preparation requirements, as applicable

Internal Assessment Criteria

- IAC0301 Describe and explain construction, application, functions and operational limits
- IAC0302 Describe the safety precautions related to the operational limits
- IAC0303 Describe the basic principles of equipment maintenance

3.2.4. KM-02-KT04: Explosives (10%)

Topic elements to be covered include:

- KT0401 Functions of explosives
- KT0402 Handling, storage, and transportation of explosives
- KT0403 Legislation related to explosives
- KT0404 Hazards related to explosives
- KT0405 Identification and reporting requirements relating to explosives and misfires

Internal Assessment Criteria

- IAC0401 Identify the types of explosive and what the reporting requirements are if found or encountered

3.3. Provider Programme Accreditation Criteria

3.3.1. Physical Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| Equipment & Tools | Equipment & Tools |
| <ul style="list-style-type: none"> Skills Development Providers will be ISO9000:2015, Quality Management, Certified. Training/facilitation resources, including fully equipped classroom and gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. Assessment tools/instruments. Relevant learning material. | <ul style="list-style-type: none"> Assessment resources, including gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. Assessment tools/instruments. |
| Consumables | Consumables |
| <ul style="list-style-type: none"> OSHE and gathering arm loader related consumables | <ul style="list-style-type: none"> OSHE and gathering arm loader consumables |

3.3.2. Human Resource Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. | <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. |

3.3.3. Legal Requirements

| Skills Development Providers | Assessment Centres |
|------------------------------|--------------------|
| | |

| | |
|--|--|
| <ul style="list-style-type: none">• Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable:<ul style="list-style-type: none">○ Occupational Health and Safety Act 85 of 1993○ Mine Health and Safety Act 29 of 1996○ Labour Relations Act 66 of 1995○ The Basic Conditions of Employment Act 75 of 1997 | <ul style="list-style-type: none">• Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable:<ul style="list-style-type: none">○ Occupational Health and Safety Act 85 of 1993○ Mine Health and Safety Act 29 of 1996○ Labour Relations Act 66 of 1995○ The Basic Conditions of Employment Act 75 of 1997 |
|--|--|

3.3.4. Critical Topics to be Assessed Externally for the Knowledge Module

None

4. 900169-000-00-KM-01, Components, controls, and consumables, NQF Level 2, Credits 4

4.1. Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of the role, function and purpose of electrical and mechanical components, equipment controls and related consumables

The learning will enable learners to demonstrate an understanding of:

- KM-04-KT01: Electrical components (10%)
- KM-04-KT02: Mechanical components (10%)
- KM-04-KT03: Machine controls (70%)
- KM-04-KT04: Consumables (10%)

4.2. Guidelines for Topics

4.2.1.KM-04- Electrical components (20%)

Topic elements to be covered include:

- KT0101 Battery operated machines, as applicable
- KT0102 Trailing cable machines, including cables drums and reels, as applicable
- KT0103 Electrical motors and components
- KT0104 Lights and lighting systems
- KT0105 Alarm systems
- KT0106 Electrical hazards
- KT0107 Electrical safety devices, such as lock-out, overload, no-voltage, earth-leakage, emergency stop and proximity devices, as applicable
- KT0108 Flame proofing principles, where applicable
- KT0109 Maintenance requirements

Internal Assessment Criteria

- IAC0101 Describe application and functions of the electrical components

4.2.2.KM-04-KT02: Mechanical components (20%)

Topic elements to be covered include:

- KT0201 Basic principles of mechanical systems, including prime-mover; chassis or frame; wheels, tracks, or free-standing; positioners; booms or masts, feed systems; compressors; controls and safety systems, as applicable
- KT0202 Basic principles of hydraulic systems, including pneumatic and hydra-power, hydraulic motors, pumps, booster pumps and jacks

- KT0203 Hazards related to hydraulic systems, including stored energy
- KT0204 Safety canopies, guards and roll over protection devices
- KT0205 Diesel engines and related systems, including filters, flame arrestors and exhaust scrubbers
- KT0206 Diesel-electric systems
- KT0207 Safety systems, including lock-out, brakes, machine cut-out systems
- KT0208 Maintenance requirements

Internal Assessment Criteria

- IAC0201 Describe application and functions of the mechanical components in the applicable work cycle

4.2.3.KM-04-KT03: Machine controls (40%)

Topic elements to be covered include:

- KT0301 Basic on-board or remote, controls, including stop-start and emergency switches, movement, steering, tramming, positioning, feeding and braking controls, as applicable
- KT0302 Operating controls, including joysticks for moving, tramming, lifting, lowering, tilting, slewing, roll-over, extension, and retraction, as applicable
- KT0303 On-board safety systems including automatic fuel cut-off, gas detection, mechanical lock-out and fire extinguishing systems, as applicable
- KT0304 Equipment monitoring and control systems; including on-board or remote monitoring; including the necessary data capturing and gathering, charting, or graphing and associated calculations, as applicable
- KT0305 Instrumentation and panels, including, lights, gauges, and flameproof panels, as applicable
- KT0306 Maintenance requirements, including daily checks

Internal Assessment Criteria

- IAC0301 Describe application and functions of the equipment control components

4.2.4.KM-04-KT04: Consumables (20%)

Topic elements to be covered include:

- KT0401 Fluids, including diesel fuel, lubricants and coolants
- KT0402 Tyres, trailing cables, hoses
- KT0403 Tools and equipment, including hand tools, as applicable

Internal Assessment Criteria

- IAC0401 Describe application and functions of the consumables

4.3. Provider Programme Accreditation Criteria

4.3.1. Physical Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| Equipment & Tools | Equipment & Tools |
| <ul style="list-style-type: none"> Skills Development Providers will be ISO9000:2015, Quality Management, Certified. Training/facilitation resources, including fully equipped classroom and gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. Assessment tools/instruments. Relevant learning material. | <ul style="list-style-type: none"> Assessment resources, including gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. Assessment tools/instruments. |
| Consumables | Consumables |
| <ul style="list-style-type: none"> OSHE and gathering arm loader related consumables | <ul style="list-style-type: none"> OSHE and gathering arm loader consumables |

4.3.2. Human Resource Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. | <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. |

4.3.3. Legal Requirements

| Skills Development Providers | Assessment Centres |
|-------------------------------------|---------------------------|
|-------------------------------------|---------------------------|

| | |
|---|---|
| <ul style="list-style-type: none"> • Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> ○ Occupational Health and Safety Act 85 of 1993 ○ Mine Health and Safety Act 29 of 1996 ○ Labour Relations Act 66 of 1995 ○ The Basic Conditions of Employment Act 75 of 1997 | <ul style="list-style-type: none"> • Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> ○ Occupational Health and Safety Act 85 of 1993 ○ Mine Health and Safety Act 29 of 1996 ○ Labour Relations Act 66 of 1995 ○ The Basic Conditions of Employment Act 75 of 1997 |
|---|---|

4.3.4. Critical Topics to be Assessed Externally for the Knowledge Module

None

SECTION 3B APPLICATION MODULE SPECIFICATIONS

List of Application Module Specifications

- 900134-000-00-PM-01, Apply, exercise, and ensure safety, health and environmental measures and procedures, NQF Level 2, Credits 4
- 900159-000-00-PM-01, Perform pre-operational activities, NQF Level 2, Credits 4
- 900169-000-00-PM-01 Operate a gathering arm loader, NQF Level 2, Credits 4

1. 900134-000-00-PM-01, Apply, exercise, and ensure safety, health and environmental measures and procedure, NQF Level 2, Credits 4

1.1. Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner an opportunity to develop the skills and competency required to apply, exercise, and ensure safety, health, and environmental requirements, in accordance with statutory, regulatory, and organisational procedures, policies, codes of practice standards and agreements; determine environmental conditions; and take appropriate action, as applicable

The learner will be required to

- PM-01-PS01 Complete safety, health, and environmental activities
- PM-01-PS02 Deal with ground and rock strata conditions

1.2. Guidelines for Practical Skills

1.2.1. PM-01-PS01 Complete safety, health, and environmental activities

Scope of Practical Skill

Given PPE, resources, and a controlled environment the learner must be able to

- PA0101 Select the appropriate personal protective equipment (PPE); confirm that all PPE is fit for purpose and in good working order; use PPE
- PA0102 Complete shift procedures; inspect and use cap lamps and batteries, as applicable; inspect and use self-rescuers, as applicable; complete lamproom procedures, as applicable
- PA0103 Inspect hand-tools, machines, and equipment; confirm hand-tools, machines and equipment are functional and fit for purpose; use hand-tools, machines, and equipment, as applicable
- PA0104 Lift and carry materials and equipment by hand, to avoid injuries and in accordance with health, safety, and ergonomic requirements; as applicable
- PA0105 Lift and move a load, using a mechanical hoist, manual or powered, in accordance with safe working practices and procedures, as applicable
- PA0106 Apply and ensure health, hygiene, safety and environmental measures and procedures for examining the workplace; inspect the work area; identify hazards, such as working in the proximity of moving machinery; unsafe ground conditions; water accumulations; unsafe underfoot conditions; unsafe ground conditions; exposure to unsafe electrical connections; working in unsafe areas; close to open excavations; in steeply inclined excavations; on slippery surfaces; over water of unknown depth, when encountering explosives, accessories, misfires and old explosives; take the appropriate action, including safeguarding against unauthorised entry, and follow signs, as applicable
- PA0107 Respond to and follow emergency procedures for seismic or earthquake events, flooding, fires, power failures, accidents to persons and workplace accidents
- PA0108 Plug leaks or inundation, where applicable

- PA0109 Follow traveling procedures, including personnel carriers and conveyances, as applicable; travel includes personnel carriers/ conveyances, travelling ways and routes, queuing, entering, and leaving personnel carriers/ carriages and conduct inside personnel carriers/ conveyances; and may include boarding/ alighting conveyors and chairlifts
- PA0110 Use the communication system, as applicable
- PA0111 Check, monitor and measure for gases, as applicable
- PA0112 Check, monitor and measure dry and wet bulb temperatures, as applicable
- PA0113 Determine and address environmental conditions, as applicable; check, monitor and measure ventilation, as applicable
- PA0114 Identify and report explosives; identify, demarcate, and plug misfires, as applicable
- PA0115 Apply fire prevention and response processes and procedures
- PA0116 Use a hand-held fire extinguisher
- PA0117 Carry out continuous risk assessment, including health, hygiene, safety, and environmental conditions; which may include air-borne pollutants, water, illumination, noise, fire and weather conditions, and fumes/ smoke; as applicable; take the appropriate action; taking measures to prevent injuries, property damage and time delays
- PA0118 Complete emergency preparedness and response processes and procedures, as required
- PA0119 Complete reporting as required

Applied Knowledge

- AK0101 Organisational, legislative, and regulatory requirements, standards, policies, processes, and procedures
- AK0102 Ground and strata control procedures
- AK0103 Hazard identification and risk assessment
- AK0104 Determining environmental conditions, as applicable
- AK0105 Identifying and dealing with explosives, as applicable
- AK0106 Emergency preparedness and response policies, procedures, and processes

Internal Assessment Criteria

- IAC0101 Shift operations are completed, in accordance with requirements
- IAC0102 Inspections are completed; including check-lists, as required, in accordance with requirements
- IAC0103 Activities are completed; and procedures complied with; in accordance with requirements
- IAC0104 Continuous risk assessment is completed in accordance with requirements
- IAC0105 Emergency preparedness and response is completed, in accordance with requirements

- IAC0106 Reporting is completed as required
- IAC0107 Understanding of the procedures and processes is demonstrated

1.2.2. PM-01-PS02 Deal with ground and strata conditions

Scope of Practical Skill

Given PPE, resources, and a controlled environment the learner must be able to

- PA0201 Select the required PPE; inspect and confirm that all PPE is fit for purpose and in good working order
- PA0202 Select the required tools and equipment; confirm that all tools and equipment are fit for purpose and in good working order; complete pre-use checklists, as applicable
- PA0203 Follow health, hygiene, safety and environmental measures and procedures for inspecting the workplace; identify deviations and take remedial action; including actions when encountering work-related hazards, such as working in the proximity of moving machinery, close to open excavations, under unsafe roof or sidewalls and in steeply inclined excavations, on slippery surfaces, and over water of unknown depth; take appropriate action when encountering explosives, accessories and misfires; and follow signs; as applicable
- PA0204 Identify relevant geological, ground and strata conditions
- PA0205 Identify relevant mining induced ground conditions
- PA0206 Determine and select the appropriate action to be taken when encountering unsafe and mining induced ground conditions, in terms of identification, separation and reporting; including demarcation; method, size and type of support to be installed, as applicable; in accordance with operational requirements, as applicable
- PA0207 Bar down loose rocks
- PA0208 Install appropriate barricades, as applicable
- PA0209 Carry out continuous risk assessment, including environmental conditions, such as air-borne pollutants, water, illumination, noise, fire and weather conditions, and fumes/ smoke; as applicable; take the appropriate action; and take measures to prevent injuries, property damage and time delays
- PA0210 Complete reporting as required

Applied Knowledge

- AK0201 Hazard identification and risk assessment
- AK0202 Determining and addressing environmental conditions, as applicable; checking, monitoring, and measuring ventilation, as applicable
- AK0203 Barring equipment and tools, as applicable
- AK0204 Dealing with explosives, as applicable

Internal Assessment Criteria

- IAC0201 Shift operations are completed, in accordance with requirements
- IAC0202 Inspections are completed; including check-lists, as required, in accordance with requirements
- IAC0203 Activities are completed; and procedures complied with; in accordance with requirements
- IAC0204 Continuous risk assessment is completed in accordance with requirements
- IAC0205 Emergency preparedness and response is completed, in accordance with requirements
- IAC0206 Reporting is completed as required
- IAC0207 Understanding of the procedures and processes is demonstrated

1.3. Provider Programme Accreditation Criteria

1.3.1. Physical Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| Equipment & Tools | Equipment & Tools |
| <ul style="list-style-type: none"> • Skills Development Providers will be ISO9000:2015, Quality Management, Certified. • Training/facilitation resources, including fully equipped classroom and gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. • Assessment tools/instruments. • Relevant learning material. | <ul style="list-style-type: none"> • Assessment resources, including gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. • Assessment tools/instruments. |
| Consumables | Consumables |
| <ul style="list-style-type: none"> • OSHE and gathering arm loader related consumables | <ul style="list-style-type: none"> • OSHE and gathering arm loader consumables |

1.3.2. Human Resource Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| <ul style="list-style-type: none"> • Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. | <ul style="list-style-type: none"> • Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. |

1.3.3. Legal Requirements

| Skills Development Providers | Assessment Centres |
|---|---|
| <ul style="list-style-type: none"> • Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> ○ Occupational Health and Safety Act 85 of 1993 ○ Mine Health and Safety Act 29 of 1996 ○ Labour Relations Act 66 of 1995 ○ The Basic Conditions of Employment Act 75 of 1997 | <ul style="list-style-type: none"> • Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> ○ Occupational Health and Safety Act 85 of 1993 ○ Mine Health and Safety Act 29 of 1996 ○ Labour Relations Act 66 of 1995 ○ The Basic Conditions of Employment Act 75 of 1997 |

1.4. Critical Practical Activities to be Assessed Externally

1.4.1. Inspections are completed; including check-lists, as required, in accordance with requirements

1.4.2. Activities are completed; and procedures complied with; in accordance with requirements

1.4.3. Continuous risk assessment is completed in accordance with requirements

1.4.4. Emergency preparedness and response is completed, in accordance with requirements

1.5. Exemptions

- None

2. 900159-000-00-PM-01, Perform pre-operational activities, NQF Level 2, Credits 4

2.1. Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner an opportunity to develop the skills required to complete perform pre-operational activities and operate the machine; effectively and safely; apply, exercise, and ensure safety, health and environmental measures and procedures; in accordance with statutory, regulatory, and organisational procedures, policies, codes of practice standards and agreements; and operating requirements

The learner will be required to

- PM-02-PS01: Identify components and controls
- PM-02-PS02: Observe and explain the operation of the machine
- PM-02-PS03: Perform pre-operational checks
- PM-02-PS04: Start-up and shut-down the machine
- PM-02-PS05: Operate machine

2.2. Guidelines for Practical Skills

2.2.1. PM-02-PS01 Identify components and controls

Scope of Practical Skill

Given PPE, an operational machine, checklists, and a controlled environment the learner must be able to:

- PA0101 Identify components on the machine, including power source, safety features, control, and all other relevant systems, including tools, air legs, support, lubricators, hoses, or electrical connections, as applicable
- PA0102 Explain the function of the relevant component in the operation of the machine
- PA0103 Describe possible defects, damage, deviations, or wear, including possible causes

Applied Knowledge

- AK0101 Specifications and limitations relevant to the components
- AK0102 Common defects, damage, deviations, or wear, including possible causes

Internal Assessment Criteria

- IAC0101 All components and controls are correctly identified
- IAC0102 Possible causes of defects, damage, deviations, or wear are described
- IAC0103 Understanding of systems and controls is demonstrated

2.2.2. PM-02-PS02 Observe and explain the operation of the machine

Scope of Practical Skill

Given PPE, an operational machine, and a controlled environment the learner must be able to:

- PA0201 Observe the operation of the machine
- PA0202 Describe and explain the operation of the machine
- PA0203 Describe the operational limitations of the machine

Applied Knowledge

- AK0201 Relevant specifications and operational limitations
- AK0202 Operating procedures, including sequence of connecting, energising, and testing the machine
- AK0203 Sensory cues for damage, deviations, defects, or wear, including monitoring the water condition which indicates rock characteristics, cavities, or gas

Internal Assessment Criteria

- IAC0201 Explanations of the operation of the machine and its limitations are correct
- IAC0202 Explanation of the sensory cues for defects, damage, deviations, or wear are correct
- IAC0203 Understanding of the principles of operation is confirmed

2.2.3. PM-02-PS03 Perform pre-operational checks

Scope of Practical Skill

Given PPE, an operational machine, and a controlled environment the learner must be able to:

- PA0301 Inspect area, identify potential hazards, and take appropriate action - continuous risk assessment
- PA0302
- PA0302 Perform pre-operational check and identify any defects, deviations, damage, or wear
- PA0303 Complete the pre-operational check
- PA0304 Report any defects, damage, deviations, or wear

Applied Knowledge

- AK0301 Machine specifications
- AK0302 Hazards, safety, health, and environment related issues
- AK0303 Signs of defects, damage, deviations, and their possible causes

Internal Assessment Criteria

- IAC0301 Pre-operational safety and machine check lists are completed correctly
- IAC0302 Checks were carried out safely
- IAC0303 All defects, damage, deviations, and wear are identified and reported

- IAC0304 Understanding of the pre-operational safety check is demonstrated

2.2.4. PM-03-PS04 Start-up and shut-down the machine

Scope of Practical Skill

Given PPE, an operational machine, and a controlled environment the learner must be able to:

- PA0401 Describe the start-up and shut-down procedure
- PA0402 Start up the machine
- PA0403 Check that the machine is running according to specified requirements
- PA0404 Complete all required safety checks and tests
- PA0405 Identify, record, and report all defects, damage and deviations and wear
- PA0406 Shut down, isolate, and lock out the machine, as applicable

Applied Knowledge

- AK0401 Correct procedures and sequences for starting up and shutting down

Internal Assessment Criteria

- IAC0401 Machine is started-up and shut down according to the relevant procedures
- IAC0402 The pre-use check is completed correctly
- IAC0403 All defects, damage and deviations are identified and reported correctly
- IAC0404 Understanding of start-up and shut-down sequences confirmed

2.3. Provider Programme Accreditation Criteria

2.3.1. Physical Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| Equipment & Tools | Equipment & Tools |
| <ul style="list-style-type: none"> • Skills Development Providers will be ISO9000:2015, Quality Management, Certified. • Training/facilitation resources, including fully equipped classroom and gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. • Assessment tools/instruments. • Relevant learning material. | <ul style="list-style-type: none"> • Assessment resources, including gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. • Assessment tools/instruments. |
| Consumables | Consumables |

| | |
|---|---|
| <ul style="list-style-type: none"> OSHE and gathering arm loader related consumables | <ul style="list-style-type: none"> OSHE and gathering arm loader consumables |
|---|---|

2.3.2. Human Resource Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. | <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. |

2.3.3. Legal Requirements

| Skills Development Providers | Assessment Centres |
|---|---|
| <ul style="list-style-type: none"> Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> Occupational Health and Safety Act 85 of 1993 Mine Health and Safety Act 29 of 1996 Labour Relations Act 66 of 1995 The Basic Conditions of Employment Act 75 of 1997 | <ul style="list-style-type: none"> Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> Occupational Health and Safety Act 85 of 1993 Mine Health and Safety Act 29 of 1996 Labour Relations Act 66 of 1995 The Basic Conditions of Employment Act 75 of 1997 |

2.4. Critical Practical Activities to be Assessed Externally

2.4.1. Inspections are completed; including check-lists, as required, in accordance with requirements

2.4.2. Activities are completed; and procedures complied with; in accordance with requirements

2.4.3. Continuous risk assessment is completed in accordance with requirements

2.4.4. Emergency preparedness and response is completed, in accordance with requirements

2.5. Exemptions

- None

3. 900169-000-00-PM-01, Operate a gathering arm loader, NQF Level 2, Credits 4

3.1. Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner an opportunity to perform operations on the machine.

The learner will be required to:

- PM-03-PS01: Mark off the cutting parameters
- PM-03-PS02: Operate machine

3.2. Guidelines for Practical Skills

3.2.1. PM-03-PS01: Mark off the cutting parameters

Scope of Practical Skill

Given an operational machine and a controlled environment the learner must be able to:

- PA0101 Identify the correct centre line from the survey pegs using a survey sight and a laser
- PA0102 Extend the centre line up to the face
- PA0103 Measure the correct distances from the centre line to determine the width of the cut and demarcate it

Applied Knowledge

- AK0101 Techniques of measuring the width of the coal cut

Internal Assessment Criteria

- IAC0101 Measurement of the coal cut demarcation is correct

3.2.2. PM-03-PS02: Operate machine

Scope of Practical Skill

Given operational machine and personnel as required, in a controlled environment and variety of simulated conditions the learner must be able to:

- PA0201 Pre-inspect, energise the machine, move, tram, locate, position, set up and perform operations, as applicable
- PA0202 Carry out sampling activities, as applicable
- PA0203 Describe the reason and purpose for each action that must be completed and describe all relevant health, safety, and environmental precautions
- PA0204 Operate the machine and take samples safely, including interaction with other operators, assistants, or bystanders, as applicable
- PA0205 Monitor machine instruments, gauges, safety devices and control performance
- PA0206 Change consumables

- PA0207 Identify and report defects, damage, deviations, and wear
- PA0208 Demonstrate the use of on-board safety systems
- PA0209 Perform emergency shut-downs
- PA0210 Park, shut down, isolate, and lock out the machine, as applicable. Carry out housekeeping including machine cleaning, as required.
- PA0211 Compile reports as required

Applied Knowledge

- AK0201 Operational specifications, as applicable
- AK0202 Hazards and safety, health, and environment related issues during operations
- AK0203 Sensory cues for defects, damage, deviations, and wear

Internal Assessment Criteria

- IAC0201 Machine operated in accordance with the operating parameters, the relevant operating procedures and within the limitations of the machine
- IAC0202 All defects, damage, deviations, and wear are reported accurately and correctly
- IAC0203 Understanding of the operation of the machine and sampling processes is demonstrated

3.3. Provider Programme Accreditation Criteria

3.3.1. Physical Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| Equipment & Tools | Equipment & Tools |
| <ul style="list-style-type: none"> • Skills Development Providers will be ISO9000:2015, Quality Management, Certified. • Training/facilitation resources, including fully equipped classroom and gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. • Assessment tools/instruments. • Relevant learning material. | <ul style="list-style-type: none"> • Assessment resources, including gathering arm loader facilities, which comply with mining occupational health, safety, and environmental standards. • Assessment tools/instruments. |
| Consumables | Consumables |
| <ul style="list-style-type: none"> • OSHE and gathering arm loader related consumables | <ul style="list-style-type: none"> • OSHE and gathering arm loader consumables |

3.3.2. Human Resource Requirements

| Skills Development Providers | Assessment Centres |
|--|--|
| <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. | <ul style="list-style-type: none"> Suitably qualified and experienced facilitators, with an ETDP NQF Level 3; and 1 years' experience in mine gathering arm loader requirements, support personnel and assessors appointed in accordance with the organisation's Quality Management system. |

3.3.3. Legal Requirements

| Skills Development Providers | Assessment Centres |
|---|---|
| <ul style="list-style-type: none"> Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> Occupational Health and Safety Act 85 of 1993 Mine Health and Safety Act 29 of 1996 Labour Relations Act 66 of 1995 The Basic Conditions of Employment Act 75 of 1997 | <ul style="list-style-type: none"> Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: <ul style="list-style-type: none"> Occupational Health and Safety Act 85 of 1993 Mine Health and Safety Act 29 of 1996 Labour Relations Act 66 of 1995 The Basic Conditions of Employment Act 75 of 1997 |

3.4. Critical Practical Activities to be Assessed Externally

3.4.1. Inspections are completed; including check-lists, as required, in accordance with requirements

3.4.2. Activities are completed; and procedures complied with; in accordance with requirements

3.4.3. Continuous risk assessment is completed in accordance with requirements

3.4.4. Emergency preparedness and response is completed, in accordance with requirements

3.5. Exemptions

- None