

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR MINING INDUSTRY

What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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Introduction

Qualifications Pack – Loader Operator

SECTOR: MINING

SUB-SECTOR: Industrial Minerals

OCCUPATION: HEMM Operations

REFERENCE ID: MIN/Q 0407

ALIGNED TO: NCO-2004/8332.14

Brief Job Description: A Loader operator drives and operates a Loader which is a heavy vehicle that is used in mines to move aside or load ROM, product etc. into or onto another type of machinery (such as a dump truck, conveyor belt, feed-hopper etc. Using a loader is a specialized task that can be safely performed with some training and experience. Safety is extremely critical to avoid property damage and personal injury. Operators are also responsible for performing basic maintenance on the Loader.

Personal Attributes: This job requires the individual to concentrate on the job at hand and complete it efficiently and effectively without any accidents so diligence and hard-working are desired attributes for individuals in this role. The individual must possess quick reflexes and reaction time. He must also demonstrate strong work ethics, an ability to communicate courteously with co-workers, and must be good with following instructions of the supervisor.

Qualifications Pack Code	MIN/Q 0407		
Job Role	Loader Operator This job role is applicable in both national and international scenarios		
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	Level 4	Version number	1.0
Sector	Mining	Drafted on	01/02/2014
Sub-sector	Industrial Minerals	Last reviewed on	24/03/2014
Occupation	HEMM Operations	Next review date	24/03/2015

Job Role	Loader Operator
Role Description	drives and operates a Loader which is a heavy vehicle used in mines to move aside or load ROM, product etc. into or onto another type of machinery such as a dump truck or conveyor belt
NVEQF/NVQF level	Level 4
Minimum Educational Qualifications*	Class XII
Training (mandatory)	<ol style="list-style-type: none"> 1. Technical and gallery training as per first schedule, Mining Vocational Training Rules (MVTR) 1966. 2. Refresher training if absent from mines for a period of one year or more before re-employment. 3. Must be trained in operating the Loader 4. Heavy Commercial Vehicle Driving License
Experience	Prior experience desirable
Applicable National Occupational Standards (NOS)	Compulsory: <ol style="list-style-type: none"> 1. MIN/N 0421(Prepare Loader) 2. MIN/N 0422(Perform Loader Operations) 3. MIN/N 0423(Perform basic maintenance and troubleshooting on Loader) 4. MIN/N 0424 (Carry Out Reporting and Logging) 5. MIN/N 0901 (Health and Safety)
Performance Criteria	As described in the relevant OS units

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Job Role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
OS	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
NOS	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Unit Code	Unit Code is a unique identifier for an Occupational Standard , which is denoted by an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills or Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS , these include communication related skills that are applicable to most job roles.

National Occupational Standard



Overview

This unit is about preparing the Loader for activities that need to be carried out during a shift

Unit Code	MIN/N 0421
Unit Title(Task)	Prepare Loader
Description	This unit is about preparing the Loader for activities that need to be carried out during a shift
Scope	This OS unit/task covers the following: <ol style="list-style-type: none"> 1. Conducting pre-operation checks to ensure the Loader is safe to use. 2. Recording details of checking and maintenance
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Pre-operation checks	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Adhere to time limits given by supervisor</p> <p>PC2. Check all mounting bolts for tightness</p> <p>PC3. Check that all securing pins are in position in pivot pins and ram pins</p> <p>PC4. Check that hose routes are clean and free from soil and stones etc.</p> <p>PC5. Check that the area around the slewing rams is clean and clear of any debris.</p> <p>PC6. Check hydraulic oil level. If necessary replenish with clean new hydraulic oil</p> <p>PC7. Check radiator coolant level monitor.</p> <p>PC8. Check engine oil level monitor</p> <p>PC9. Check condition of parking brake, main horn, reverse horn, and head light.</p> <p>PC10. Check the various control gauges.</p> <p>PC11. Check fan belt tension, electrolyte level and terminal tightness</p> <p>PC12. Clean air filter dust bowls</p> <p>PC13. Drain water and sediment from the fuel tank.</p> <p>PC14. Apply grease to all greasing pins and pivot points</p> <p>PC15. Follow manufacturer’s instructions for care and safe operation of the Loader.</p> <p>PC16. Work responsibly and carefully so as not to put the health and safety of self or others at risk.</p> <p>PC17. Before beginning with the task, clearly understand the dimensions of the machine, the work area, weight of the machine as well as the heavy load to ensure safety while in operation</p>

Recording details	<p>PC18. Maintain a checking/maintenance logbook to record all activities performed before starting the Loader</p> <p>PC19. Inform supervisor of problems that are beyond scope of his role</p>
Knowledge and Understanding (K)	
<p>A. Regulatory context (knowledge of safety guidelines specified by Director General of Mine Safety (DGMS))</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Different types of mines and detail of the mine he is working in</p> <p>KA2. Mine Organisation, time keeping, need for discipline and punctuality</p> <p>KA3. Benching in quarries, Dressing of overhangs, undercuts, fencing, first aid and hygiene</p> <p>KA4. Code of traffic in specific areas of mine. Significance of fences</p> <p>KA5. Standing orders in force at the mine. Safety in the vicinity of machinery</p> <p>KA6. Shot-firing and Safety regulations. How and where to take shelter</p> <p>KA7. Tramways and siding, Haulage rooms, Winding rooms, Boilers, Electrical Gears</p> <p>KA8. Duties of workmen under Mines act</p> <p>KA9. Provision of wages, working hours and accident compensation as per Mines act</p> <p>KA10. Knowledge of mining safety procedures</p> <p>KA11. Outcome of violation of safely procedures</p> <p>KA12. Environmental impact of mining</p> <p>KA13. Sources of dust, noise and vibration and measures to minimise</p> <p>KA14. Precautions to be taken when handling heavy equipment.</p> <p>KA15. Refresher training as per fourth schedule MVTR (1966) within one month of joining duties following absence from duties for a period exceeding one year.</p>
<p>B. Organizational Context (Knowledge of organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Job specific documents e.g. daily maintenance checklist and its significance</p> <p>KB2. Locally prepared emergency response / disaster management plan.</p> <p>KB3. Safety policy of the company</p> <p>KB4. Risk and impact of not following defined procedures/work instructions</p> <p>KB5. Escalation matrix for reporting identified problems</p> <p>KB6. Cost of equipment and loss for the company that results from damage of equipment</p> <p>KB7. Direct/indirect cost of accidents for the company</p> <p>KB8. Implications of delays in process to the company</p>

B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KC1. Different types of loader (bucket loader, front loader, front-end loader, pay-loader, scoop, shovel, skip loader, or wheel loader) and their specific uses.</p> <p>KC2. Introduction to petrol and diesel engines, their components and functions</p> <p>KC3. Steering and transmission systems</p> <p>KC4. Different types of hydraulic mechanisms</p> <p>KC5. Service brakes and parking brakes</p> <p>KC6. Instrument panel, their location and operation</p> <p>KC7. Knowledge of wheels, tyres, optimal pressure</p> <p>KC8. Controls, levers and switches in order to operate the Loader properly</p> <p>KC9. Battery and Dynamo connections</p> <p>KC10. General safety rules vis-à-vis digging and stacking.</p> <p>KC11. Signage, mining area signs and other safety and emergency signals</p> <p>KC12. Correct maintenance procedures for Loader</p> <p>KC13. Response to emergencies e.g. correct way to use fire extinguisher</p> <p>KC14. Optimal working condition of Loader components e.g. hoist, propel system, power train and other attachments.</p> <p>KC15. Visual checks to identify damage, defects, cracks or leaks beforehand</p> <p>KC16. Parts of Loader that need routine lubrication</p> <p>KC17. Optimal engine oil pressure, radiator coolant temperature</p>
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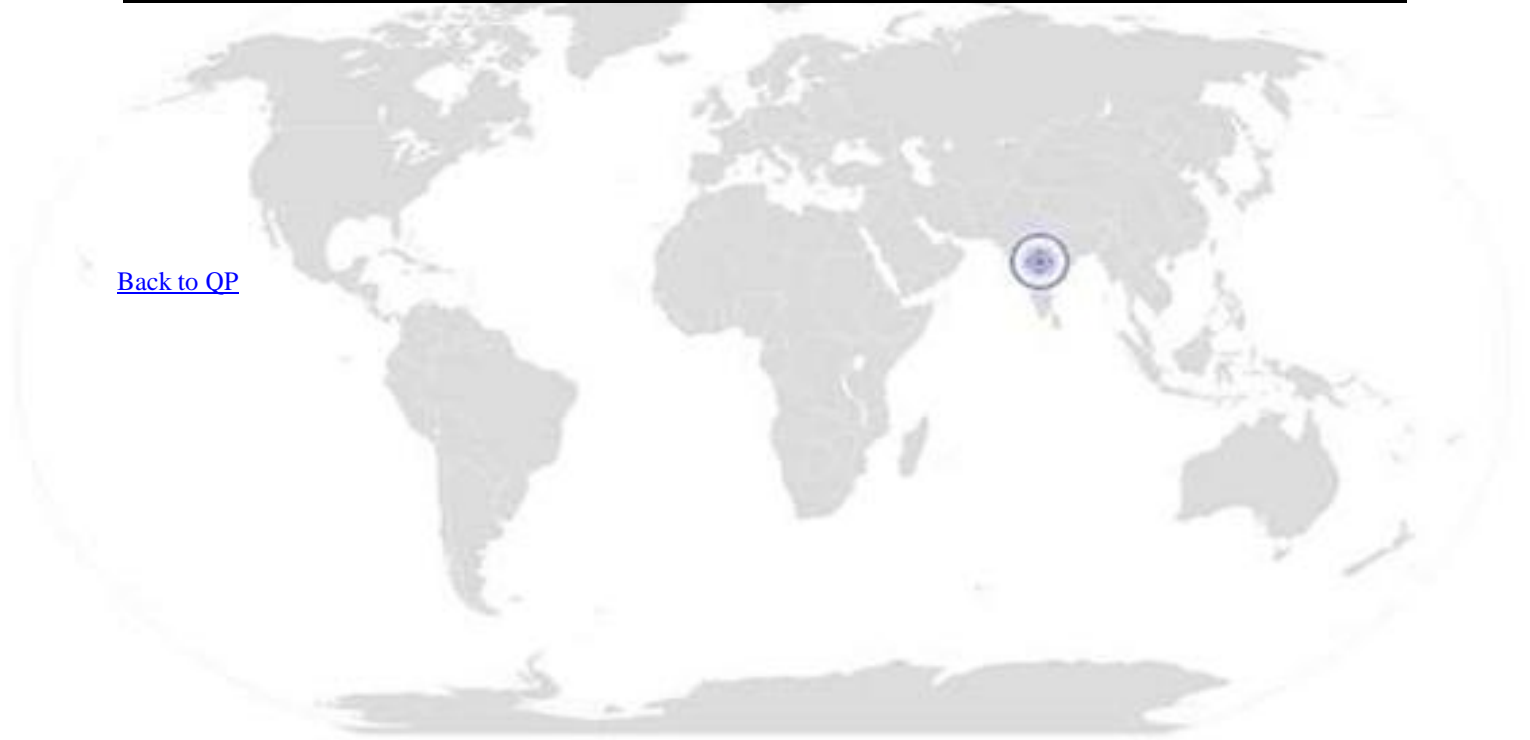
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Fill out check-list /maintenance logbooks detailing maintenance activities conducted</p> <p>SA2. Fill out administrative forms</p>
	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA3. Read operators' manual</p> <p>SA4. Read and understand checking/maintenance logbook</p> <p>SA5. Read and comprehend banners /signage</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. Communicate with supervisors and peers in a proper manner adhering to the values of respect for individual.</p>

B. Professional Skills	Integrity
	The user/individual on the job needs to know and understand how to:
	SA7. Maintain integrity with respect to company property and time
	SA8. Resolve difficulties in relationships with colleagues amicably
	Motivation
	The user/individual on the job needs to know and understand how to:
	SA9. Take responsibility for completing one's own work assignment
	SA10. Take initiative to enhance/learn skills in one's area of work
	Reliability
	The user/individual on the job needs to know and understand how to:
SA12. Avoid absenteeism	
SA13. Work in a disciplined environment	
SA14. Be punctual	
Time Management	
The user/individual on the job needs to know and understand how to:	
SB1. Prioritize and execute tasks within the scheduled time limits	
Analytical Thinking	
The user/individual on the job should be able to:	
SB2. Suggest methods to avoid accidents while operating Loader	
SB3. Over the time, identify possible ways to improve productivity	
Organizational Skills	
The user/individual on the job needs to know and understand how to:	
SB4. Be a team player and achieve collective goals	
SB5. Concentrate on task at hand and complete it without errors	
Fault Diagnostic and Maintenance	
The user/individual on the job needs to know and understand how to:	
SB6. Conduct maintenance tasks e.g. checking and topping up engine and hydraulic oil levels etc.	

NOS Version Control

NOS Code	MIN/N 0421		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Sector	Mining	Drafted on	01/02/14
Sub-sector	Industrial Minerals	Last reviewed on	24/03/14
Occupation	HEMM operations	Next review date	24/03/15

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National Occupational Standard



Overview

This unit is about performing operations while using the Loader

Unit Code	MIN/N 0422
Unit Title(Task)	Perform Loader Operations
Description	This unit is about operating the Loader
Scope	This OS unit/task covers the following: <ul style="list-style-type: none"> 1. Starting and driving the Loader safely to the operations area 2. Loader operations
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Starting and Trimming	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Plan and organize the job according to given instructions and schedule</p> <p>PC2. Inspect the worksite to identify any loose soil, hidden deep trenches or marshy patches where loader could get stuck.</p> <p>PC3. Start the engine using the pushbutton switch and key switch together</p> <p>PC4. Use the priming pump and pre-heater to start the engine in cold weather conditions</p> <p>PC5. Ensure that the backhoe is in transport position while the tractor is moving.</p> <p>PC6. Operate the shifting quadrant device for selecting the correct gear range</p> <p>PC7. Ensure the loader load and operating speed is within limits; specifically limits speed when moving around pipes, cables or other workers.</p> <p>PC8. Perform in-operation visual checks on critical temperature and pressure gauges.</p> <p>PC9. Ensure that walkway rules e.g. operating the Loader within the permissible/allocated areas are followed.</p> <p>PC10. Utilize judiciously various signaling devices available in the Loader such as turn signal, parking indicator, air horn etc.</p> <p>PC11. Keep a safe distance from a tip edge and use an approved stop block before tipping over an edge</p> <p>PC12. Keep a safe distance from other plant or vehicles</p>

Operate Loader	<p>PC13. Deploys the digger stabilizer legs to level the machine when working on a slope</p> <p>PC14. Obtains stability and anchorage during digging operation by using the loader arms to lift the front wheel clear on the ground.</p> <p>PC15. Deftly operates the four levers provided to control the digging arm, dipper arm and stabilizer legs</p> <p>PC16. Effectively maneuvers the joystick lever provided for backhoe operations.</p> <p>PC17. Discharge the load safely at the position and in the manner designated by the supervisor</p> <p>PC18. Ensure that no other operators travel on or stand near the Loader</p> <p>PC19. Ensure that backhoe is never used for craning</p> <p>PC20. Select and use the right type of brake in different situations and conditions.</p> <p>PC21. Inform supervisor of any problems while operating the Loader</p> <p>PC22. Ensure that Loader is always parked on firm, level ground; with handbrake applied and drive and controls disengaged</p>
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Knowledge and Understanding (K)	
<p>A. Regulatory context (knowledge of safety guidelines specified by Director General of Mine Safety (DGMS))</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Different types of mines and detail of the mine he is working in</p> <p>KA2. Mine Organisation, time keeping, need for discipline and punctuality</p> <p>KA3. Benching in quarries, Dressing of overhangs, undercuts, Fencing, First aid and Hygiene</p> <p>KA4. Code of traffic in specific areas of mine. Significance of fences</p> <p>KA5. Standing orders in force at the mine. Safety in the vicinity of machinery</p> <p>KA6. Shot-firing and Safety regulations. How and where to take shelter</p> <p>KA7. Tramways and siding, Haulage rooms, Winding rooms, Boilers, Electrical Gears</p> <p>KA8. Duties of workmen under Mines act</p> <p>KA9. Provision of wages, working hrs. and accident compensation as per Mines act</p> <p>KA10. Knowledge of mining safety procedures</p> <p>KA11. Outcome of violation of safely procedures</p> <p>KA12. Precautions to be taken when handling heavy equipment.</p> <p>KA13. Refresher training as per fourth schedule MVTR (1966) within one month of joining duties following absence from duties for a period exceeding one year.</p>

<p>B. Organizational</p> <p>Context</p> <p>(Knowledge of organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Job specific documents e.g. daily maintenance checklist and importance of the same</p> <p>KB2. Safety policy of the company</p> <p>KB3. Locally prepared emergency response / disaster management plan</p> <p>KB4. Risk and impact of not following defined procedures/work instructions</p> <p>KB5. Escalation matrix for reporting identified problems</p> <p>KB6. Cost of equipment and loss for the company that results from damage of equipment</p> <p>KB7. Direct/indirect cost of accidents for the company</p> <p>KB8. Implications of delays in process to the company</p>
<p>C. Technical</p> <p>Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KC1. Different types of loader (bucket loader, front loader, front-end loader, pay-loader, scoop, shovel, skip loader, or wheel loader) and their specific use.</p> <p>KC2. Basics of engine , its components and their functioning</p> <p>KC3. Different types of steering mechanism, emergency steering function</p> <p>KC4. Basics of power transmission</p> <p>KC5. Functions of the three types of brakes - Service brake, Torque converter and Parking brake</p> <p>KC6. Identification, location and function of all controls available in the instrument panel.</p> <p>KC7. Safe reading range of meters and gauges e.g. fuel gauge, engine oil pressure and temperature</p> <p>KC8. Battery and dynamo connections</p> <p>KC9. General safety guidelines for loading, hauling, dumping, stocking and parking in a mine.</p> <p>KC10. Signage and other safety and emergency signals</p> <p>KC11. Working in congested places like stock piles and below dangerous overhangs</p> <p>KC12. Risks involved in working on defective machine</p> <p>KC13. Response to emergencies e.g. fire or major failure</p> <p>KC14. Operating steps of various grades of fire extinguishers.</p> <p>KC15. Identify any unusual sound emanating from the engine</p>

Skills (S)	
A. Core Skills/ Generic Skills	Reading Skills
	The user/individual on the job needs to know and understand how to: SA1. Read schedule given by supervisor SA2. Read and adhere to signage as per standard mining nomenclature SA3. Read operators' manuals
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA4. Communicate with supervisors and peers
	Integrity
	The user/individual on the job needs to know and understand how to: SA5. Maintain integrity with respect to company property and time SA6. Communicate with supervisors and peers in a proper manner adhering to the values of respect for individual SA7. Resolve any difficulties in relationships with colleagues or get help from
	Motivation
	The user/individual on the job needs to know and understand how to: SA8. Take responsibility for completing one's own work assignment SA9. Take initiative to enhance/learn skills in one's area of work. SA10. Reflect and act upon one's learning from experience
	Reliability
	The user/individual on the job needs to know and understand how to: SA11. Avoid absenteeism SA12. Work in a disciplined manner SA13. Be punctual
B. Professional skills	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB1. Suggest methods to avoid accidents while operating Loader SB2. Identify possible ways to improve operational efficiency
	Time Management
	The user/individual on the job needs to know and understand how to: SB3. Prioritize and execute tasks within the scheduled time limits
	Organizational Skills
The user/individual on the job needs to know and understand how to: SB4. Be a team player and achieve collective goals	

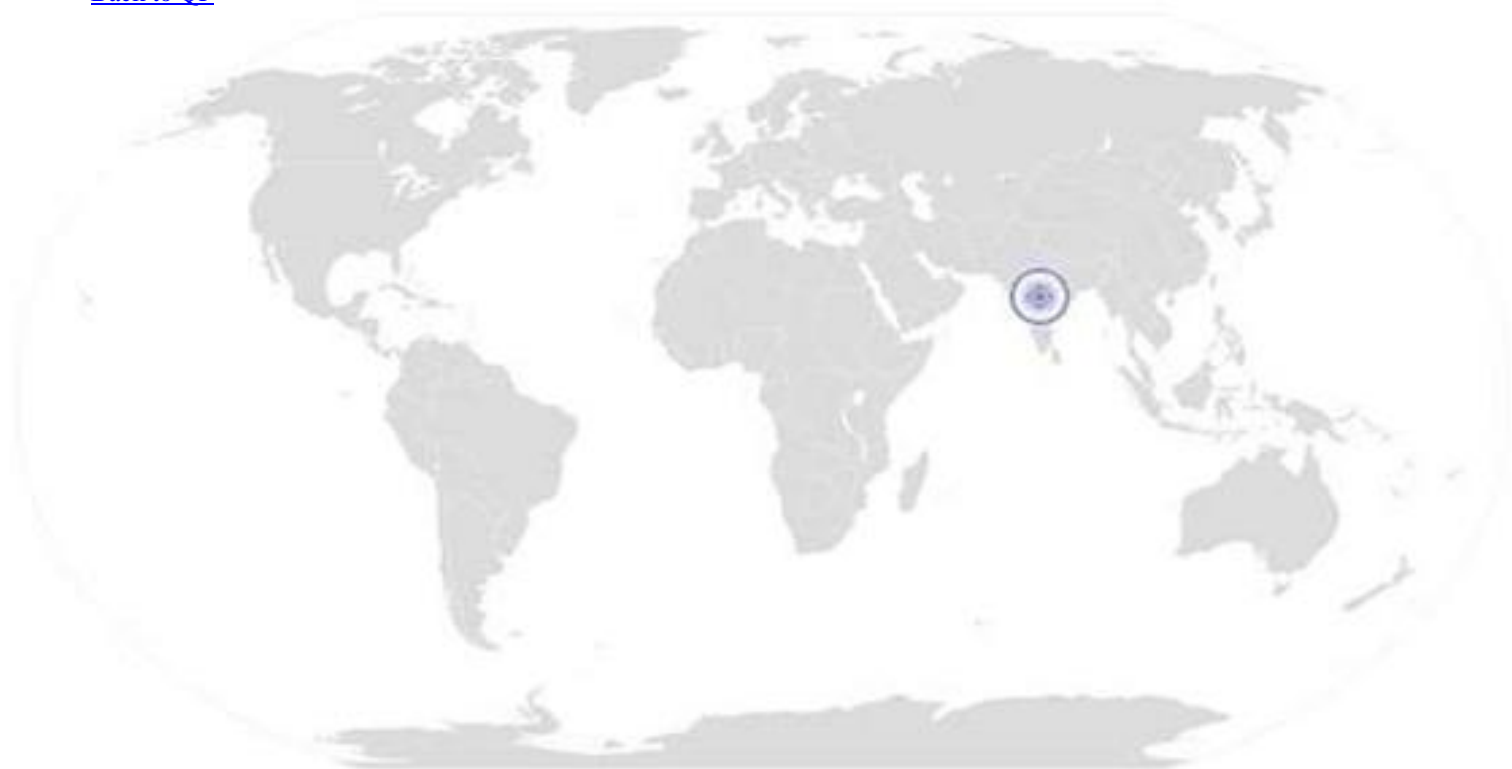
C. Technical skills	Loader operations
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SC1. Perform driving operations such as forward, reverse, 'U' turn, tight spot maneuvering, etc.</p> <p>SC2. Select and use the correct combination of levers to operate the Backhoe and the loader.</p> <p>SC3. Maneuver the loader and backhoe attachments to achieve various tasks without causing accidents.</p>
	Fault Diagnostic and Maintenance
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SC4. Check for damage in Loader components e.g. engine, hydraulic pump, gear box, transmission sub-assembly, Slew ram assembly, pressure release valve.</p>



NOS Version Control

NOS Code	MIN/N 0422		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Sector	Mining	Drafted on	01/02/14
Sub-sector	Industrial Minerals	Last reviewed on	24/03/14
Occupation	HEMM operations	Next review date	24/03/15

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National Occupational Standard



Overview

This unit is about performing routine maintenance and troubleshooting on the Loader

Unit Code	MIN/N 0423
Unit Title (Task)	Perform routine maintenance and troubleshooting on the Loader
Description	This unit is about performing routine maintenance and troubleshooting tasks on the Loader
Scope	This OS unit/task covers the following: <ul style="list-style-type: none"> 1. Preventive maintenance in accordance with the manufacturer’s recommendations and company procedures 2. Basic diagnostics and Troubleshooting
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Preventive maintenance	<p>To be a competent loader operator, the individual on the job must also be able to:</p> <p>PC1. Track machine operating hours to assess the right service schedule.</p> <p>PC2. Clean air filter dust bowls</p> <p>PC3. Clean footplates, pedals and steps free from mud, dirt, ice and snow</p> <p>PC4. Drain water and sediment /fuel separators</p> <p>PC5. Replenish coolants, lubricants and fluids</p> <p>PC6. Grease all greasing pins and pivot points</p> <p>PC7. Check battery levels and condition of the terminals and carrying out minor adjustments if required.</p> <p>PC8. Check and maintain the tyre rims, air pressure, wheel nuts and treads.</p> <p>PC9. Complete timely and legibly daily/weekly maintenance/defect sheets as provided by the company</p>
Troubleshooting	<p>PC10. Ensure the locking bar is in position to prevent the front and rear chassis moving and creating a crushing zone (articulated machines only)</p> <p>PC11. Ensure that no maintenance task on the engine is performed when running or still hot.</p> <p>PC12. Check the instrument panel and control gauge to identify out-of range readings to find the defect / cause of failure</p> <p>PC13. Assess when the problem is beyond his competence and report the problem to suitably qualified and competent personnel</p>

Knowledge and Understanding (K)	
A. Regulatory context (knowledge of safety guidelines specified by Director General of Mine Safety (DGMS))	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KA1. Different types of mines and detail of the mine he is working in KA2. Mine Organisation, time keeping, need for discipline and punctuality KA3. Benching in quarries, Dressing of overhangs, undercuts, Fencing, First aid and Hygiene KA4. Code of traffic in specific areas of mine. Significance of fences KA5. Standing orders in force at the mine. Safety in the vicinity of machinery KA6. Shot-firing and Safety regulations. How and where to take shelter KA7. Tramways and siding, Haulage rooms, Winding rooms, Boilers, Electrical Gears KA8. Duties of workmen under Mines act KA9. Provision of wages, working hours and accident compensation as per Mines act KA10. Knowledge of mining safety procedures KA11. Outcome of violation of safely procedures KA12. Precautions to be taken when handling explosives KA13. Refresher training as per fourth schedule MVTR (1966) within one month of joining duties following absence from duties for a period exceeding one year.
B. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KB1. Types of documentation in organization e.g. daily maintenance checklist and importance of the same KB2. Risk and impact of not following defined procedures/work instructions KB3. Rules and regulations of mine as per standard operating procedure (SOP) KB4. Risk and impact of not following company's SOP KB5. Escalation matrix for reporting identified problems
C. Technical Knowledge	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KC1. Different types of Loaders and their specific use KC2. Introduction to petrol and diesel engines, their components and functions KC3. Steering and transmission systems KC4. Different types of hydraulic mechanisms KC5. Service brakes and parking brakes KC6. Instrument panel, their location and operation KC7. Controls, levers and switches in order to operate the Loader properly KC8. Battery and Dynamo connections

	<p>KC9. General safety rules vis-à-vis digging and stacking.</p> <p>KC10. Signage, mining area signs and other safety and emergency signals</p> <p>KC11. Correct maintenance procedures for Loader</p> <p>KC12. Response to emergencies e.g. correct way to use fire extinguisher</p> <p>KC13. Optimal working condition of Loader components e.g. hoist, propel system, power train and other attachments.</p> <p>KC14. Visual checks to identify damage, defects or leaks beforehand</p> <p>KC15. Parts of Loader that need routine lubrication</p>
Skills (S)	
A. Core Skills/ Generic Skills	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. Read schedule given by supervisor</p> <p>SA2. Read and adhere to signage as per standard mining nomenclature</p> <p>SA3. Read operators' manuals</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA4. Communicate with supervisors and peers in a polite and professional manner</p>
	Integrity
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Maintain integrity with respect to company property and time</p> <p>SA6. Resolve any difficulties in relationships with colleagues amicably.</p>
	Motivation
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA7. Take responsibility for completing one's own work assignment</p> <p>SA8. Take initiative to enhance/learn skills in one's area of work</p>
	Reliability
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA9. Avoid absenteeism</p> <p>SA10. Be punctual</p>

B. Professional Skills	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB1. Suggest methods to avoid accidents/errors while operating Loader SB2. Identify possible ways to improve operational efficiency
	Time Management
C. Technical Skills	Loader operations
	The user/individual on the job needs to know and understand how to: SC1. Perform driving operations such as forward, reverse, 'U' turn, tight spot maneuvering, etc. SC2. Select and use the correct combination of levers to operate the Loader. SC3. Maneuver the blade and rear attachments to achieve various tasks
	Fault Diagnostic and Maintenance
	The user/individual on the job needs to know and understand how to: SC4. Check for damage in Loader components e.g. engine components, tracks, hydraulic arms, Blade, parking break, main horn, etc. SC5. Read and understand machine fault codes



NOS Version Control

NOS Code	MIN/N 0423		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Sector	Mining	Drafted on	01/02/14
Sub-sector	Industrial Minerals	Last reviewed on	24/03/14
Occupation	HEMM operations	Next review date	24/03/15

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National Occupational Standard



Overview

This unit is about reporting and documentation

Unit Code	MIN/N 0424
Unit ID (Task)	Carry out reporting and documentation
Description	This unit is about carrying out reporting and documentation
Scope	This unit/task covers the following: <ul style="list-style-type: none"> 1. Reporting of problem/incidents etc. 2. Documentation
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Reporting	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> PC1. Report problems/incidents as applicable in a timely manner PC2. Report to the appropriate authority as laid down by the employer PC3. Follow reporting procedures as prescribed by the employer PC4. Report any unsafe act/condition in work area which may endanger his or his colleagues life
Documentation	<ul style="list-style-type: none"> PC4. Identify documentation to be completed relating to one's role PC5. Record details accurately using the appropriate format PC6. Complete all documentation within stipulated time. PC7. Make sure documents are available to all appropriate authorities to inspect
Knowledge and Understanding (K)	
A. Regulatory context (knowledge of safety guidelines specified by Director General of Mine Safety (DGMS))	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KA1. Different types of mines and detail of the mine he is working in KA2. Commonly used mining terminology - Benches (width, height etc.), haul roads (width, gradient), stability of slopes, over hang, under cut, high side etc. KA3. Duties of workmen under Mines act KA4. Provision of wages, working hours and accident compensation as per Mines act KA5. Knowledge of mining safety procedures KA6. Outcome of violation of safely procedures KA7. Precautions to be taken when handling heavy equipment.

<p>B. Organizational</p> <p>Context (Knowledge of organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Job specific documents e.g. daily maintenance checklist and importance of the same</p> <p>KB2. Safety policy of the company</p> <p>KB3. Risk and impact of not following defined procedures/work instructions</p> <p>KB4. Escalation matrix for reporting identified problems</p> <p>KB5. Cost of equipment and loss for the company that results from damage of equipment</p>
<p>Skills (S)</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Writing Skills</p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Fill up documentation applicable to one's role</p>
	<p>Reading Skills</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA2. Read english and/or vernacular language with few pauses and a constant speed</p> <p>SA3. Read and understand manuals, health and safety instructions, memos etc</p> <p>SA4. Ability to read from different sources - books, screens in machines, signange etc.</p> <p>SA5. Understand the various color codes, as per standard mining nomenclature</p>
	<p>Oral Communication (Listening and Speaking skills)</p>
<p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. Express statements or information clearly so that others can hear and understand</p> <p>SA7. Participate in and understand the main points of simple discussions</p> <p>SA8. Respond appropriately to any queries</p> <p>SA9. Communicate with supervisor</p>	

NOS Code	MIN/N 0424		
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD	Version number	1.0
Sector	Mining	Drafted on	01/02/14
Sub-sector	Industrial Minerals	Last reviewed on	24/03/14
Occupation	HEMM operations	Next review date	24/03/15

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National Occupation Standards



Overview

This unit is about health and safety measures critical in open-cast mines

Unit Code	MIN/N 0901
Unit Title (Task)	Health and Safety
Description	This unit is about health and safety measures critical in open-cast mines
Scope	This OS unit/task covers the following: <ol style="list-style-type: none"> 1. Critical health and safety measures for open-cast mines
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Safety, Security and Administrative	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Comply with occupational health and safety regulations adopted by the employer.</p> <p>PC2. Follow mining operations procedures with respect to materials handling and accidents</p> <p>PC3. Follow the correct safety steps in case of accident or major failure</p> <p>PC4. Comply with safety regulations and procedures in case of fire hazard.</p> <p>PC5. Operate various grades of fire extinguishers.</p> <p>PC6. Work responsibly and as safe and careful as possible so as not to put the health and safety of self or others at risk, including members of the public</p> <p>PC7. Perform storage and transport of hazardous materials compliant with safety guidelines prescribed by DGMS.</p> <p>PC8. Identify characteristics of post-blast fumes and take necessary precautions.</p> <p>PC9. Wears safety gear such as hard hat, respiratory protection, eye protection, ear protection</p> <p>PC10. Follow the manufacturer’s instructions for care and safe operation of the equipment.</p>

Knowledge and Understanding (K)	
<p>A. Regulatory context (knowledge of safety guidelines specified by Director General of Mine Safety (DGMS))</p>	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> KA1. Benching in quarries, Dressing of overhangs, undercuts, Fencing KA2. First aid and Hygiene KA3. Code of traffic in specific areas of mine. Significance of fences KA4. Standing orders in force at the mine. Safety in the vicinity of machinery KA5. Shot-firing and Safety regulations. How and where to take shelter KA6. Knowledge of mining safety procedures KA7. Outcome of violation of safety procedures KA8. Hazardous material safety and security rules and regulations KA9. Environmental impact of mining KA10. Sources of dust, noise and vibration and measures to minimise KA11. Code of practice for safe handling and transport of heavy equipment.



NOS Version Control

NOS Code	MIN / N 0901		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Sector	Mining	Drafted on	01/02/14
Sub-sector	Industrial Minerals	Last reviewed on	24/03/2014
Occupation	HEMM operations	Next review date	24/03/2015

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List of Abbreviations

Term	Description
NOS	National occupation standards
QP	Qualification pack
NVEQF	National vocational education qualifications framework
NSQF	National skills qualifications framework
HEMM	Heavy earth moving machinery
NCVT	National council for vocational training
DGMS	Directorate general of mines safety
PC	Performance Criteria
FIMI	Federation of Indian mineral industries

