

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR AGRICULTURE

Contents

1. Introduction and Contacts..... 1
2. Qualificaiton Pack2
3. OS Units2
4. Glossary of Key Terms & Nomenclature.....3

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

Contact Us:

Agriculture Skill Council of India, K 59, South City I, Gurgaon – 122 018, Haryana

E-mail: ceo@asci-india.com



Introduction

Qualifications Pack – Tractor Operator

SECTOR: AGRICULTURE

SUB-SECTOR: Farm Mechanisation

OCCUPATION: Farm Machinery and Equipment Operation and Maintenance

REFERENCE ID: AGR / Q 0401

Tractor and Operator: The individual is responsible for the operation of the tractors for agriculture purposes and also is responsible for the maintenance of the same.

Brief Job Description: The person continuously keeps the vehicle free of any complaints, takes up basic repairs wherever feasible and are necessary and also would take up various agriculture activities as per the needs of the farmers.

Personal Attributes: The operator should work independently, sensitive to farmer’s needs and must have the ability to take up maintenance and repairs (minor) of the tractor as and when necessary. Should possess basic understanding and acumen towards crop cultivation. The individual should be result oriented and is responsible for his own working and learning.

Job Details	Qualifications Pack Code	AGR/ Q 0401		
	Job Role	Tractor Operator The job role is applicable for national scenario and international		
	Credits(NVEQF/NVQF/NSQF) [OPTIONAL]		Version number	1.0
	Sector	Agriculture	Drafted on	20/06/13
	Sub-sector	Farm Mechanisation	Last reviewed on	08/08/13
	Occupation	Farm Machinery and Equipment Operation and Maintenance	Next review date	10/02/14

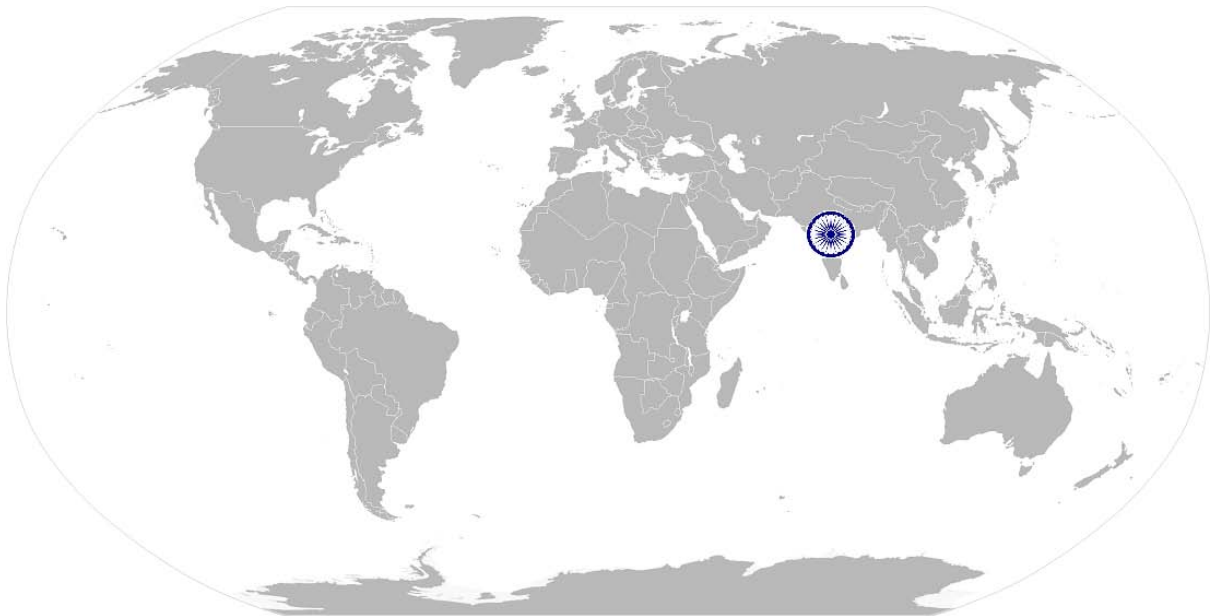
Job Role	Tractor operator
Role Description	Field operation and daily maintainance of tractor
NVEQF/NVQF level	4
Minimum Educational Qualifications*	10 th Standard Appeared or pass
Maximum Educational Qualifications*	Not Applicable
Training (Suggested but not mandatory)	Should have known driving and have a driving license issues by competent authority.
Experience	Not Applicable
Applicable National Occupational Standards (NOS)	Compulsory: 1. AGR / N 0037 – Operation of the tractor 2. AGR / N 0038 - Tractor Maintenance
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.

Acronyms

Keywords /Terms	Description
OS	Occupation Standard
NOS	National Occupation Standard
NVEQF	National Vocational Education and Qualification Framework
Agr	Agriculture

National Occupational Standard



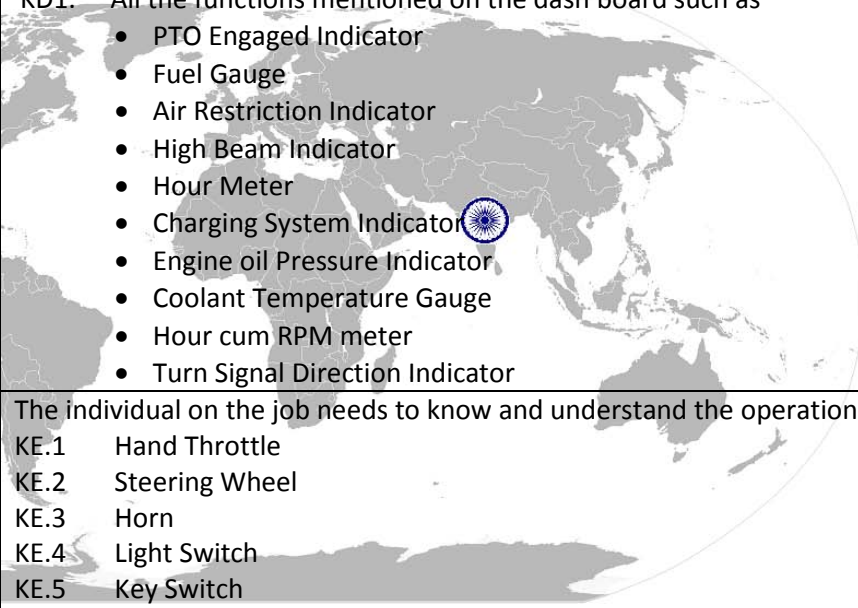
Overview

This unit is about Tractor Operation.

Operation of the Tractor

Unit Code	AGR / N 0037
Unit Title (Task)	Operation of the tractor
Description	This OS is for a Tractor Operator who is responsible for its daily operations.
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Do the daily checks Ballasting importance and process PC and DC levers Gear and RPM selection Implements and Trailer Land preparation requirement and do the land opening Use of implement for tractor
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Do the daily checks	<p>To be competent, the individual on the job must be able to:</p> <p>PC.1 Lubricate rear axle bearing</p> <p>PC.2 Check engine oil level</p> <p>PC.3 Check coolant level</p> <p>PC.4 Drain water and sediment from fuel filter</p> <p>PC.5 Lubricate tie rod ends</p> <p>PC.6 Lubricate Steering spindles</p> <p>PC.7 Lubricate front axle pivot pin</p>
Ballasting importance and process	PC.8 Use of ballasting as per the need
PC & DC levers	PC.9 Operate PC & DC levers as per the need
Gear & RPM selection	PC.10 Do proper gear & RPM selection
Implements And Trailer	<p>PC.11 Classify tillage implements into Primary tillage implements, Secondary Tillage implements, levelling equipment and trailer</p> <p>PC.12 Select proper implement for a specific function</p> <p>PC.13 Take precautions before using Implements and Trailer</p>
Land Preparation Requirement & Land Opening	<p>PC.14 Select and suggest the implements as per the need of the farmer</p> <p>PC.15 Take up the following function:</p> <ul style="list-style-type: none"> Reducing ped size Weed control Incorporation of fertilizers Puddling Leveling soil surface wheel track adjustment Do sway chain adjustment Position and adjust the Centre link

Operation of the Tractor

	<ul style="list-style-type: none"> • Measure wheel slippage
Use Of Implement For Tractor	PC.16 Do Lateral & horizontal adjustments of Implements PC.17 Do Hitching and unhitching the implement from tractor
Knowledge and Understanding (K)	
A. Agro Climatic Zone	The individual on the job needs to know and understand: KA1. Various climatic parameters such as maximum and minimum temperatures, intensity and distribution of precipitation (rainfall), relative humidity etc., that affect field operations
B. Understanding Of Implements	The individual on the job needs to know and understand: KB1. All implements that can be attached and how KB2. Importance of depth and width of cut KB3. Importance of Mast Height
C. Know Fuel Saving Tips	The individual on the job needs to know and understand: KC1. Right way of operating to ensure proper fuel usage.
D. Understanding Dash Board	The individual on the job needs to know and understand: KD1. All the functions mentioned on the dash board such as <ul style="list-style-type: none"> • PTO Engaged Indicator • Fuel Gauge • Air Restriction Indicator • High Beam Indicator • Hour Meter • Charging System Indicator • Engine oil Pressure Indicator • Coolant Temperature Gauge • Hour cum RPM meter • Turn Signal Direction Indicator 
E. Tractor Controls & Levers	The individual on the job needs to know and understand the operation of: <ul style="list-style-type: none"> KE.1 Hand Throttle KE.2 Steering Wheel KE.3 Horn KE.4 Light Switch KE.5 Key Switch KE.6 Hazard Switch KE.7 Turn Signal Switch KE.8 Clutch Pedal KE.9 Fuel shut of knob KE.10 Foot Throttle KE.11 Brake pedal KE.12 Selective Control Lever KE.13 Rockshaft Position Control Lever KE.14 Rockshaft Draft Control Lever KE.15 Gear Shaft Lever KE.16 PTO Clutch Lever KE.17 Range Shaft lever KE.18 Rockshaft rate of drop valve KE.19 Differential Lock Pedal

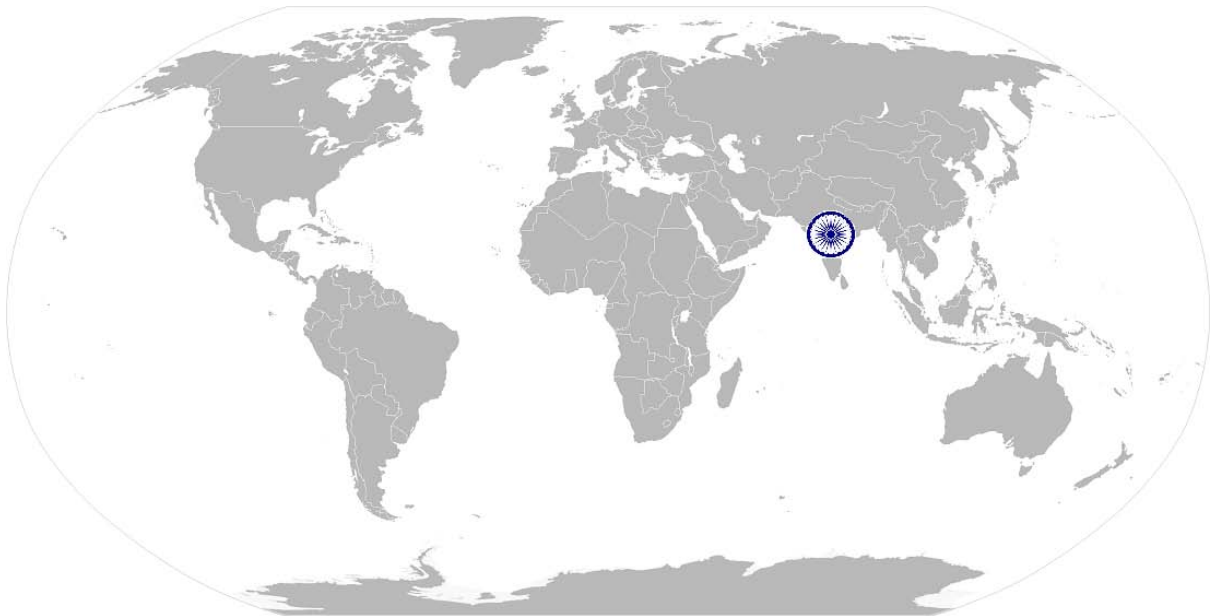
Operation of the Tractor

F. Safety	The individual on the job needs to know and understand: KF.1 Driving and must possess a tractor driving license issued by an authorized body. KF.2 Recommendations of the manufacturer for implementation usage KF.3 Safe methods of handling the tools KF.4 First aid KF.5 Stickers and safety logos.
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Reading and Comprehension Skills
	The individual on the job needs to know and understand how to: SA1. Read and write.
	Behavior and Oral Communication (Listening and Speaking skills)
	The individual on the job needs to know and understand how to: SA2. Maintain effective working relationships SA3. Communicate clearly and effectively with others like farmers, concerned officer/stakeholders SA4. Co-operate with others in accordance with required procedures SA5. understand information and grasp its meaning SA6. Seek advice from seniors
B. Professional Skills	Decision Making
	The individual on the job needs to know and understand how to: SB1. Make decisions pertaining to the concerned area of work SB2. Identify problems that may arise in carrying out tasks and take preventive action

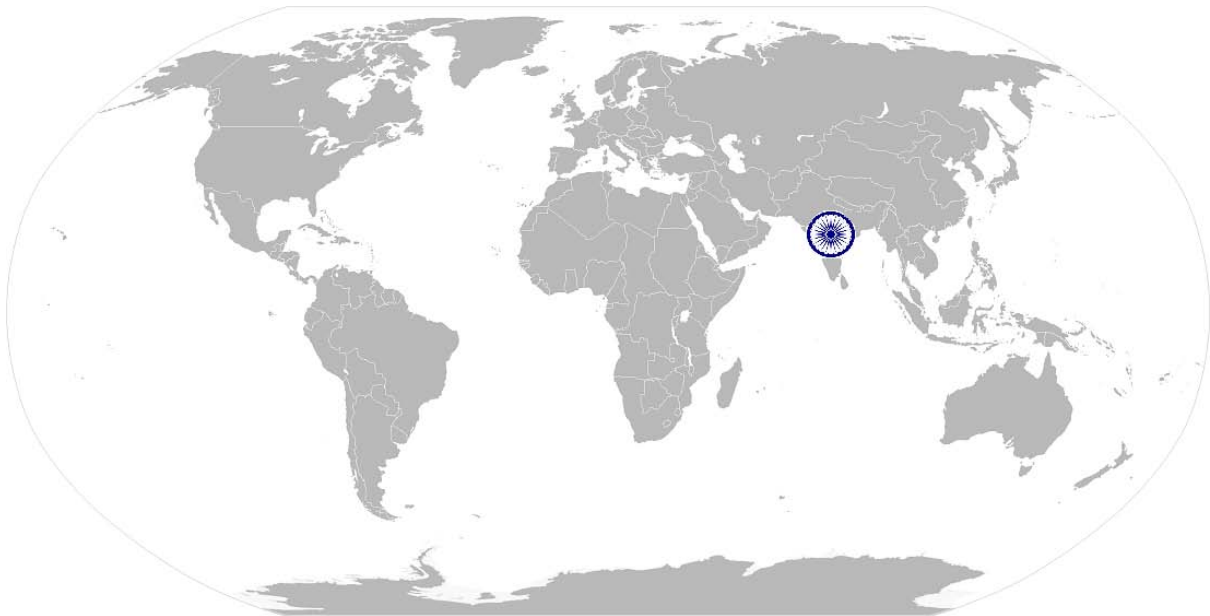
NOS Version Control

NOS Code	AGR / N 0037		
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Agriculture	Drafted on	20/06/13
Industry Sub-sector	Farm Mechanization	Last reviewed on	08/08/13
		Next review date	10/02/14

Operation of the Tractor



National Occupational Standard



Overview

This unit is about Tractor Maintenance detailing.

Tractor Maintenance

Unit Code	AGR / N 0038
Unit Title (Task)	Tractor Maintenance
Description	This OS is for a Tractor Operator who is responsible for its maintenance.
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Study and follow of owner's manual • Obtaining certified tools • Check and maintain fluids regularly/ lubrication points • Ensure right tyre pressure • Check belts and hoses • Brake and clutch adjustment • Check working of all the electrical systems and gauges • Avoid overloading • Attachment and detachment of Implements
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Study And Follow Of Owner's Manual	To be competent, the individual on the job must be able to: PC.1 Follow intervals for routine maintenance PC.2 Lubricate different parts of the tractor PC.3 Follow basic operating instructions
Obtaining Certified Tools	PC.4 Procure maintenance tools that are certified for such operations from a recognized body.
Check And Maintain Fluids Regularly/ Lubrication Points	PC.5 Check the engine oil PC.6 Check the transmission fluid/ hydraulic oil PC.7 Check the coolant in the radiator/ reservoir tank
Ensure Right Tyres Pressure	PC.8 Ensure all the tyres have the right inflation pressure as per the usage of the tractor
Check Belts And Hoses	PC.9 If fittings or connections are leaking, tighten them or replace the seals.
Brake And Clutch Adjustment	PC.10 Ensure proper adjustment of the brake and clutch, and make sure the brakes and clutches free play are adjusted properly PC.11 Ensure that brake paddle latch should be engaged while driving on road.
Check Working Of All The Electrical Systems And Gauges	PC.12 Always ensure the right temperature, oil pressure and hour meter PC.13 Ensure working of headlights, brake lights and horns.
Avoid Overloading	To be competent, the individual on the job must be able to: PC.14 Always use a recommended load as suggested by the manufacturer.
Attachment And Detachment Of Implements	PC.15 Attachment and detachment of Implements

Tractor Maintenance

Knowledge and Understanding (K)	
A. Agro Climatic Zone	The individual on the job needs to know and understand: KA1. Various climatic parameters such as maximum and minimum temperatures, intensity and distribution of precipitation (rainfall), relative humidity etc.,
B. Understanding Of Implements	The individual on the job needs to know and understand: KB1. Know which all implements can be attached and how
C. Safety	The individual on the job needs to know and understand: KC1. Safe methods of handling the tools KC2. First aid KC3. Understand the stickers and safety logos.
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Reading and Comprehension Skills
	The individual on the job needs to know and understand how to: SA1. Read and write.
	Behavior and Oral Communication (Listening and Speaking skills)
	The individual on the job needs to know and understand how to: SA2. Maintain effective working relationships SA3. Communicate clearly and effectively with others like farmers, concerned officer/stakeholders SA4. Co-operate with others in accordance with required procedures SA5. Understand information and grasp its meaning SA6. Seek advice from seniors
B. Professional Skills	Decision Making
	The individual on the job needs to know and understand how to: SB1. Make decisions pertaining to the concerned area of work SB2. Identify problems that may arise in carrying out tasks and take preventive action following farm procedures.

NOS Version Control

NOS Code	AGR / N 0038		
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Agriculture	Drafted on	20/06/13
Industry Sub-sector	Farm Mechanization	Last reviewed on	08/08/13
		Next review date	10/02/14