

# QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR AGRICULTURE AND ALLIED 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 – Tractor Operator

**SECTOR:** AGRICULTURE AND ALLIED

**SUB-SECTOR:** Agriculture Crop Production

**OCCUPATION:** Farm Machinery and Equipment Operation and Maintenance

**REFERENCE ID:** AGR/Q1101

**ALIGNED TO:** NCO-2015/8341.0101

**Tractor and Operator:** The individual is responsible for the operation of tractor for agriculture purposes and also is responsible for the periodical 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	<b>Qualifications Pack Code</b>	<b>AGR/Q1101</b>		
	<b>Job Role</b>	<b>Tractor Operator</b>		
	<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
	<b>Sector</b>	<b>Agriculture And Allied</b>	<b>Drafted on</b>	<b>25/02/14</b>
	<b>Sub-sector</b>	<b>Agriculture Crop Production</b>	<b>Last reviewed on</b>	<b>14/06/17</b>
	<b>Occupation</b>	<b>Farm Machinery, Equipment Operation And Maintenance</b>	<b>Next review date</b>	<b>14/06/21</b>
	<b>NSQC Clearance on</b>	<b>18/06/2015</b>		

<b>Job Role</b>	<b>Tractor operator</b>
<b>Role Description</b>	Responsible for Field operation and daily maintainance of tractor
<b>NSQF level</b>	4
<b>Minimum Educational Qualifications</b>	10 <sup>th</sup> Standard Pass, Preferably
<b>Maximum Educational Qualifications</b>	Not Applicable
<b>Training</b> (Suggested but not mandatory)	Should have known driving and have a driving license issued by competent authority
<b>Minimum Job Entry Age</b>	18 years
<b>Experience</b>	Not Applicable
<b>Applicable National Occupational Standards (NOS)</b>	<b>Compulsory:</b> <ol style="list-style-type: none"> <li><a href="#">AGR/N1101 Operation of the tractor</a></li> <li><a href="#">AGR/N1102 Tractor Maintenance</a></li> <li><a href="#">AGR/N9903 Maintain health &amp; Safety at the work place</a></li> </ol>
<b>Performance Criteria</b>	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

## Qualifications Pack For Tractor Operator

### Acronyms

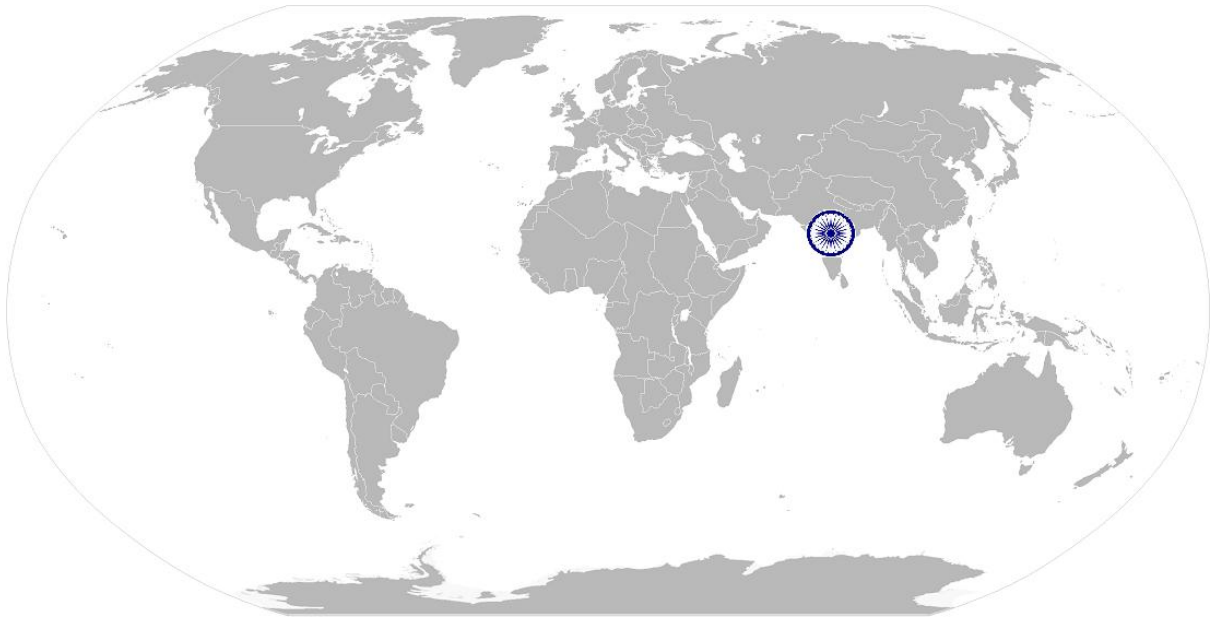
	communication related skills that are applicable to most job roles.
Keywords /Terms	Description
OS	Occupation Standard
NOS	National Occupation Standard
NSQF	National Skills Qualification Framework
Agr	Agriculture

AGR / N1101

Operation of the Tractor

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# National Occupational Standard



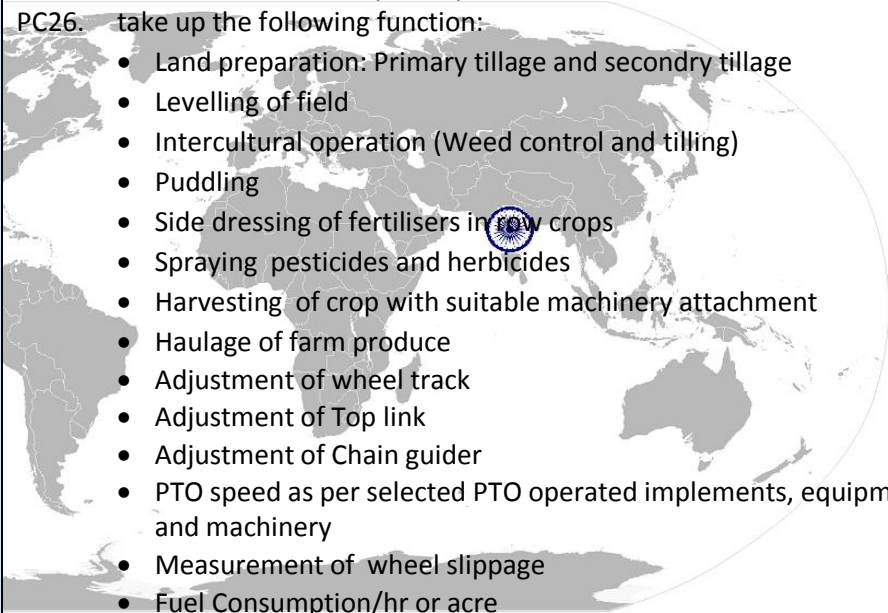
## Overview

This unit is about Tractor Operation.

**AGR/ N1101**

**Operation of the Tractor**

<b>Unit Code</b>	<b>AGR / N1101</b>
<b>Unit Title (Task)</b>	<b>Operation of the tractor</b>
<b>Description</b>	This OS is for a Tractor Operator who is responsible for its daily operations.
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Do the daily checks</li> <li>• Ballasting importance and process</li> <li>• PC and DC levers</li> <li>• Gear and RPM selection</li> <li>• Implements and Trailer</li> <li>• Land preparation requirement and do the land opening</li> <li>• Use of implement for tractor</li> </ul>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Do the daily checks</b>	<p>To be competent, the individual on the job must be able to:</p> <p>PC1. lubricate rear axle bearing (daily/periodically as per the equipment manufacturer's recommendation)</p> <p>PC2. check engine oil level</p> <p>PC3. check transmission oil level</p> <p>PC4. check steering box oil level</p> <p>PC5. check coolant level</p> <p>PC6. drain water and sediment from fuel filter</p> <p>PC7. lubricate tie rod ends</p> <p>PC8. lubricate steering spindles</p> <p>PC9. lubricate front axle pivot pin</p> <p>PC10. lubricate clutch linkage, throttle linkage hand, foot linkage and all hinges</p> <p>PC11. clean pre-cleaner</p> <p>PC12. check for leakages if any</p> <p>PC13. check the working of all lights</p> <p>PC14. check tightness of wheel nuts</p> <p>PC15. apply nipple greasing (once in 50 hours for dry land and once in 10 hours for wet land recommended)</p>
<b>Ballasting importance and process</b>	<p>To be competent, the individual on the job must be able to:</p> <p>PC16. use of ballasting as per the need</p>
<b>PC &amp; DC levers or Hydraulic lift performance</b>	<p>To be competent, the individual on the job must be able to:</p> <p>PC17. operate pc &amp; dc levers as per the need and in combination for mixed control/blending</p> <p>PC18. hydraulic lift performance with weight fitted to lower links - check:</p>

AGR/ N1101	<b>Operation of the Tractor</b>
	Draft control Position control Response control
<b>Gear &amp; RPM selection</b>	To be competent, the individual on the job must be able to: PC19. do proper gear & RPM selection
<b>Implements And Trailer</b>	To be competent, the individual on the job must be able to: PC20. classify tillage implements into primary tillage implements, secondary tillage implements, levelling equipment and trailer PC21. classify cat i and ii implements PC22. select proper implement for a specific function PC23. take precautions before using implements and trailer
<b>Land Preparation Requirement &amp; Land Opening</b>	To be competent, the individual on the job must be able to: PC24. select and suggest the implements as per the need of the farmer PC25. calibrate seed drill as per requirement PC26. take up the following function: <ul style="list-style-type: none"> <li>• Land preparation: Primary tillage and secondary tillage</li> <li>• Levelling of field</li> <li>• Intercultural operation (Weed control and tilling)</li> <li>• Puddling</li> <li>• Side dressing of fertilisers in row crops</li> <li>• Spraying pesticides and herbicides</li> <li>• Harvesting of crop with suitable machinery attachment</li> <li>• Haulage of farm produce</li> <li>• Adjustment of wheel track</li> <li>• Adjustment of Top link</li> <li>• Adjustment of Chain guider</li> <li>• PTO speed as per selected PTO operated implements, equipments and machinery</li> <li>• Measurement of wheel slippage</li> <li>• Fuel Consumption/hr or acre</li> </ul> 
<b>Use Of Implement For Tractor</b>	To be competent, the individual on the job must be able to: PC27. do lateral & horizontal adjustments of implements PC28. do hitching and unhitching the implement from tractor
<b>Tractor operation</b>	To be competent, the individual on the job must be able to: PC29. functions of gauges & controls PC30. wheel track setting- application & demo PC31. hitching & unhitching of implements PC32. types of implements & their use, methods of field operation and field running adjustments PC33. preparing the tractor for field operation PC34. adjustment of clutch & brake
<b>Knowledge and Understanding (K)</b>	

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**Operation of the Tractor**

<p><b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant legislation, standards, policies, and procedures in work</p> <p>KA2. relevant health and safety requirements applicable in the work environment</p> <p>KA3. own job role and responsibilities and sources for information pertaining to work</p> <p>KA4. who to approach for support in order to obtain work related information, clarifications and support</p> <p>KA5. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business</p> <p>KA6. documentation and related procedures applicable in the context of work</p>
<p><b>B. Technical Knowledge</b></p>	<p>The individual on the job needs to know and understand:</p> <p>KB1. Various climatic parameters such as maximum and minimum temperatures, intensity and distribution of precipitation (rainfall), relative humidity etc., that affect field operations</p> <p>KB2. Topography, condition of land, type of soil, moisture level of soil, type of previous crop and crop to be sown, method of sowing, depth of sowing</p> <p>KB3. Selection of suitable implements, equipments and machineries for different field operation according to hp of tractor, pto speed, topography, soil, crop and sowing method</p> <p>KB4. Hitching &amp; unhitching of implements, various process of agricultural practices, types of implements &amp; their use, methods of field operation, preparing the tractor and implement, equipment and machinery for field operation</p> <p>KB5. Method and depth of ploughing, seed bed preparation according to crops &amp; sowing depth and spraying height and height of harvesting</p> <p>KB6. All implements that can be attached and how</p> <p>KB7. Importance of depth and width of cut</p> <p>KB8. Importance of Mast Height</p> <p>KB9. Methods of ploughing (casting &amp; gathering)</p> <p>KB10. Right way of operating to ensure proper fuel usage</p> <p>KB11. Selection of proper gear, pto speed, rpm of engine</p> <p>KB12. All the functions mentioned on the dash board such as</p> <ul style="list-style-type: none"> <li>● PTO Engaged Indicator</li> <li>● Fuel Gauge</li> <li>● Air Restriction Indicator</li> <li>● High Beam Indicator</li> <li>● Hour Meter</li> <li>● Charging System Indicator</li> <li>● Engine oil Pressure Indicator</li> <li>● Coolant Temperature Gauge</li> </ul>



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**Operation of the Tractor**

- Hour cum RPM meter
- Turn Signal Direction Indicator
- PTO speed Indicator (540/1100 rpm)
- 4-wheel drive indicator
- Transmission – neutral indicator
- Parking brake indicator
- Service due indicator
- Water in fuel indicator
- Engine high temperature indicator
- Hazard indicator

KB13. Hand Throttle

KB14. Steering Wheel

KB15. Horn

KB16. Light Switch

KB17. Key Switch

KB18. Hazard Switch

KB19. Turn Signal Switch

KB20. Clutch Pedal

KB21. Fuel shut of knob

KB22. Foot Throttle

KB23. Brake pedal

KB24. Effectiveness of hand brake

KB25. Selective Control Lever

KB26. Rockshaft Position Control Lever

KB27. Rockshaft Draft Control Lever

KB28. Gear Shaft Lever

KB29. PTO Clutch Lever

KB30. Range Shaft lever

KB31. Rockshaft rate of drop valve

KB32. Differential Lock Pedal

KB33. Isolator valve

KB34. Reverse PTO lever

KB35. PTO lever

KB36. Forward-reverse shuttle

KB37. Plough lamp switch

KB38. Driver's seat adjustment

KB39. 7-pole socket

KB40. Driving and must possess a tractor driving license issued by an authorized body.

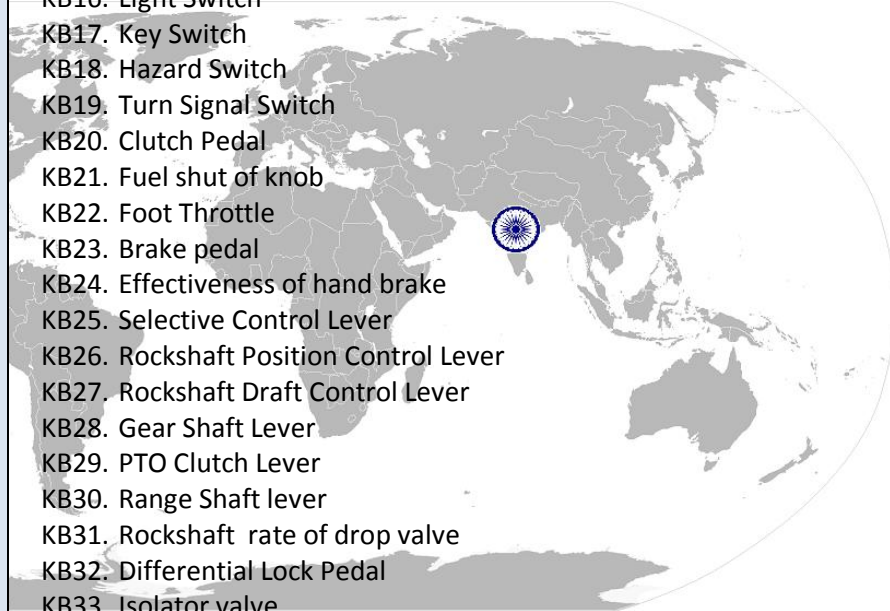
KB41. Traffic signs / road safety regulations awareness

KB42. Recommendations of the manufacturer for implementation usage

KB43. Safe methods of handling the tools

KB44. First aid

KB45. Stickers and safety logos.



**AGR/ N1101**

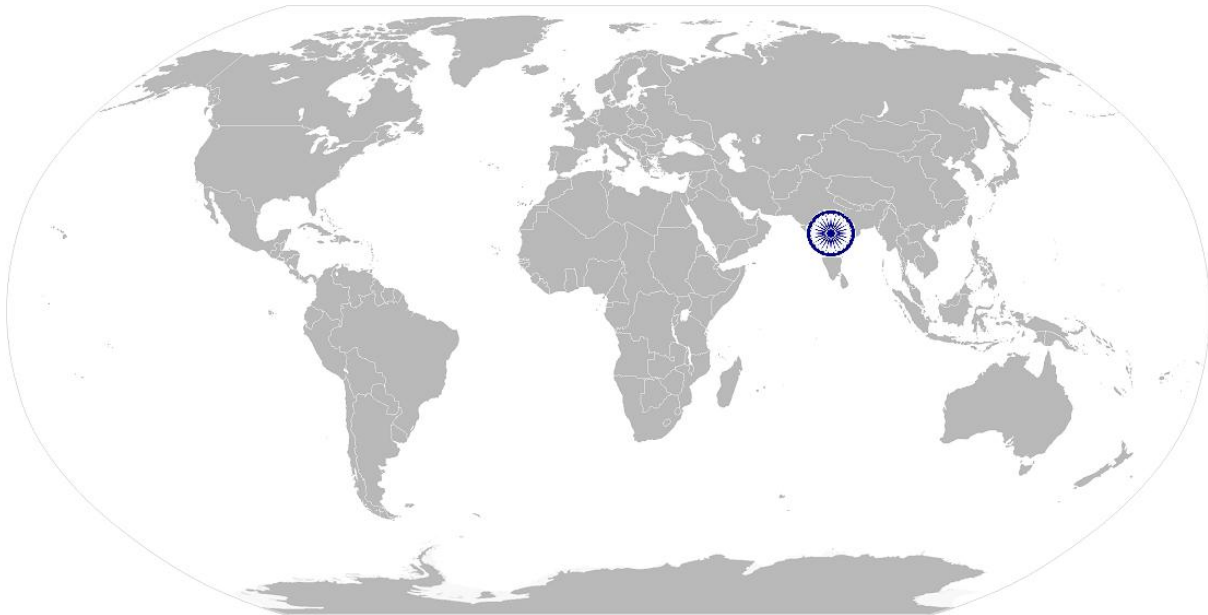
**Operation of the Tractor**

	KB46. HIV awareness
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	The individual on the job needs to know and understand how to: SA1. note down different readings-fuel consumption, Kilometers run etc
	<b>Reading Skills</b>
	The individual on the job needs to know and understand how to: SA2. read operation manual
	<b>Oral Communication (Listening and Speaking skills)</b>
	The individual on the job needs to know and understand how to: SA3. Maintain effective working relationships SA4. Communicate clearly and effectively with others like farmers, concerned officer/stakeholders SA5. Co-operate with others in accordance with required procedures SA6. understand information and grasp its meaning SA7. Seek advice from seniors
	<b>B. Professional Skills</b>
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	
<b>Plan and Organize</b>	
The individual on the job needs to know and understand how to: SB3. plan different field operations to be undertaken	
<b>Customer Centricity</b>	
The individual on the job needs to know and understand how to: SB4. manage relationships with co-workers and other farmers	
<b>Problem Solving</b>	
The individual on the job needs to know and understand how to: SB5. Think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s) SB6. Deal with others workers lacking the technical knowledge to solve the problem on their own SB7. Identify creative and innovative quick solutions to resolve delays	
<b>Analytical Thinking</b>	

**AGR/ N1101**

**Operation of the Tractor**

	The individual on the job needs to know and understand how to: SB8. Monitor and maintain the condition of tractor SB9. Apply, analyze, and evaluate the information gathered from observation, experience, reasoning, or communication, as a guide to thought and action
	<b>Critical Thinking</b>
	The individual on the job needs to know and understand how to: SB10. take up one's own learning



**AGR/ N1101**

**Operation of the Tractor**

**NOS Version Control**

NOS Code	AGR / N1101		
Credits(NSQF)	TBD	Version number	1.1
Sector	Agriculture And Allied	Drafted on	25/02/14
Sub-sector	Agriculture Crop Production	Last reviewed on	14/06/17
Occupation	Farm Machinery, Equipment Operation And Maintenance	Next review date	14/06/21

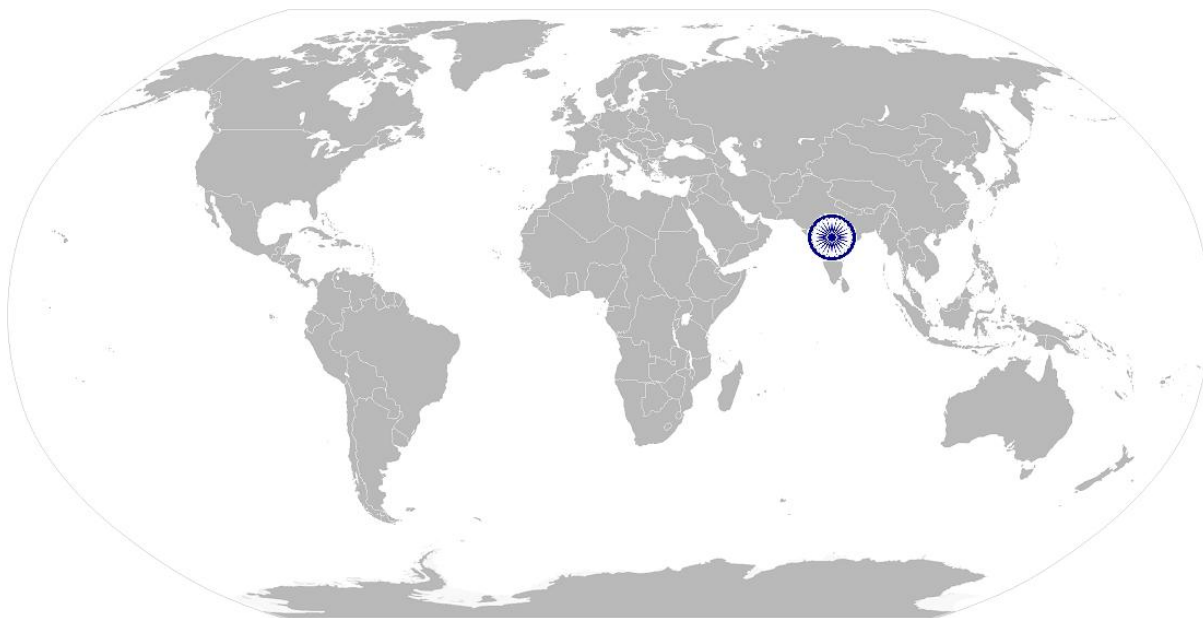


AGR / N1102

Tractor Maintenance

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# National Occupational Standard



## Overview

This unit is about Tractor Maintenance detailing.

**AGR / N1102**

**Tractor Maintenance**

National Occupational Standard

<b>Unit Code</b>	<b>AGR / N1102</b>
<b>Unit Title (Task)</b>	<b>Tractor Maintenance</b>
<b>Description</b>	This OS is for a Tractor Operator who is responsible for its maintenance.
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Study and follow of owner's manual</li> <li>• Obtaining certified tools</li> <li>• Check and maintain fluids regularly/ lubrication points</li> <li>• Ensure right tyre pressure</li> <li>• Check belts and hoses</li> <li>• Brake and clutch adjustment</li> <li>• Check working of all the electrical systems and gauges</li> <li>• Avoid overloading</li> <li>• Attachment and detachment of Implements</li> </ul>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Study And Follow Of Owner's Manual</b>	To be competent, the individual on the job must be able to: PC1. follow intervals for routine maintenance PC2. lubricate different parts of the tractor PC3. follow basic operating instructions
<b>Obtaining Certified Tools</b>	PC4. procure maintenance tools that are certified for such operations from a recognized body.
<b>Check And Maintain Fluids Regularly/ Lubrication Points</b>	PC5. check the engine oil PC6. check the transmission fluid/ hydraulic oil PC7. check the coolant in the radiator/ reservoir tank PC8. bleeding of fuel system PC9. clean oil bath/dry type air cleaner PC10. check engine, transmission, hydraulic, steering oil level and topping up if necessary PC11. replace fuel filters and electrical fuses PC12. check battery electrolyte level
<b>Ensure Right Tyres Pressure</b>	PC13. ensure all the tyres have the right inflation pressure as per the usage of the tractor PC14. remove and refit tyres for puncture
<b>Check Belts And Hoses</b>	PC15. if fittings or connections are leaking, tighten them or replace the seals.
<b>Brake And Clutch Adjustment</b>	PC16. ensure proper adjustment of the brake and clutch, and make sure the brakes and clutches free play are adjusted properly PC17. ensure that brake paddle latch should be engaged while driving on road.

## AGR / N1102 Tractor Maintenance

<b>Check Working Of All The Electrical Systems And Gauges</b>	PC18. always ensure the right temperature, oil pressure and hour meter PC19. ensure working of headlights, brake lights and horns
<b>Avoid Overloading</b>	To be competent, the individual on the job must be able to: PC20. always use a recommended load as suggested by the manufacturer
<b>Attachment And Detachment Of Implements</b>	PC21. attachment and detachment of Implements
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant legislation, standards, policies, and procedures in work</p> <p>KA2. relevant health and safety requirements applicable in the work environment</p> <p>KA3. own job role and responsibilities and sources for information pertaining to work</p> <p>KA4. who to approach for support in order to obtain work related information, clarifications and support</p> <p>KA5. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business</p> <p>KA6. documentation and related procedures applicable in the context of work</p>
<b>B. Technical Knowledge</b>	<p>The individual on the job needs to know and understand:</p> <p>KB1. Various climatic parameters such as maximum and minimum temperatures, intensity and distribution of precipitation (rainfall), relative humidity etc.,</p> <p>KB2. Know which all implements can be attached and how</p> <p>KB3. Safe methods of handling the tools</p> <p>KB4. First aid</p> <p>KB5. Understand the stickers and safety logos</p> <p>KB6. HIV awareness</p>
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	The individual on the job needs to know and understand how to: SA1. note down different readings-fuel consumption, Kilometers run etc
	<b>Reading Skills</b>
	The individual on the job needs to know and understand how to: SA2. read operation manual
	<b>Oral Communication (Listening and Speaking skills)</b>

**AGR / N1102**

**Tractor Maintenance**

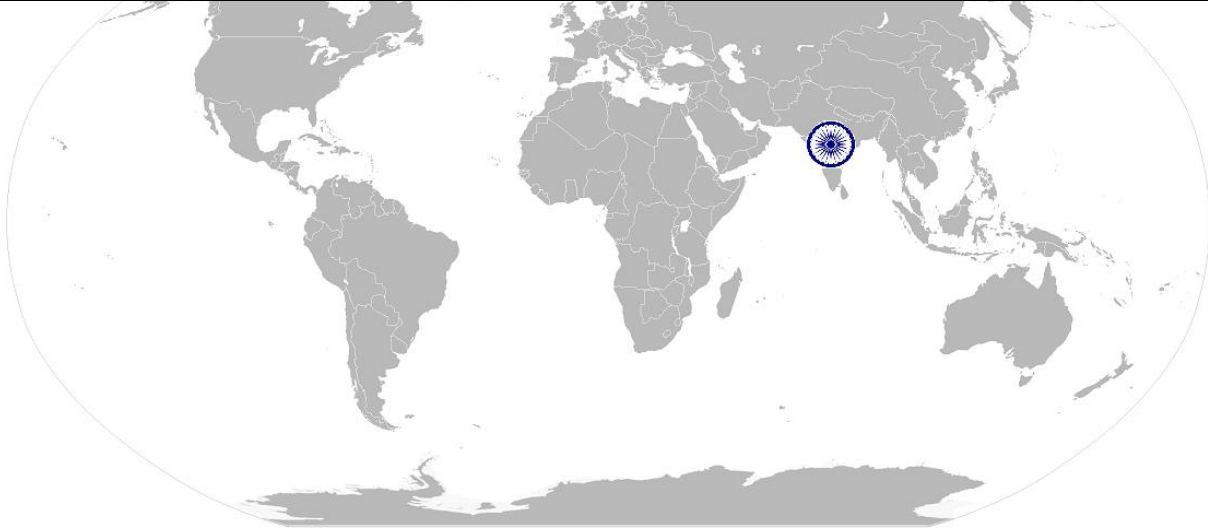
	<p>The individual on the job needs to know and understand how to:</p> <p>SA3. Maintain effective working relationships</p> <p>SA4. Communicate clearly and effectively with others like farmers, concerned officer/stakeholders</p> <p>SA5. Co-operate with others in accordance with required procedures</p> <p>SA6. understand information and grasp its meaning</p> <p>SA7. Seek advice from seniors</p>
<p><b>B. Professional Skills</b></p>	<p><b>Decision Making</b></p>
	<p>The individual on the job needs to know and understand how to:</p> <p>SB1. Make decisions pertaining to the concerned area of work</p> <p>SB2. Identify problems that may arise in carrying out tasks and take preventive action</p>
	<p><b>Plan and Organize</b></p>
	<p>The individual on the job needs to know and understand how to:</p> <p>SB3. plan different field operations to be undertaken</p>
	<p><b>Customer Centricity</b></p>
	<p>The individual on the job needs to know and understand how to:</p> <p>SB4. manage relationships with co-workers and other farmers</p>
	<p><b>Problem Solving</b></p>
	<p>The individual on the job needs to know and understand how to:</p> <p>SB5. Think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s)</p> <p>SB6. Deal with others workers lacking the technical knowledge to solve the problem on their own</p> <p>SB7. Identify creative and innovative quick solutions to resolve delays</p>
	<p><b>Analytical Thinking</b></p>
	<p>The individual on the job needs to know and understand how to:</p> <p>SB8. Monitor and maintain the condition of tractor</p> <p>SB9. Apply, analyze, and evaluate the information gathered from observation, experience, reasoning, or communication, as a guide to thought and action</p>
<p><b>Critical Thinking</b></p>	
<p>The individual on the job needs to know and understand how to:</p> <p>SB10. take up one's own learning</p>	



**AGR / N1102                      Tractor Maintenance**

**NOS Version Control**

<b>NOS Code</b>	<b>AGR / N1102</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	<b>Agriculture And Allied</b>	<b>Drafted on</b>	<b>25/02/14</b>
<b>Sub-sector</b>	<b>Agriculture Crop Production</b>	<b>Last reviewed on</b>	<b>14/06/17</b>
<b>Occupation</b>	<b>Farm Machinery, Equipment Operation And Maintenance</b>	<b>Next review date</b>	<b>14/06/21</b>

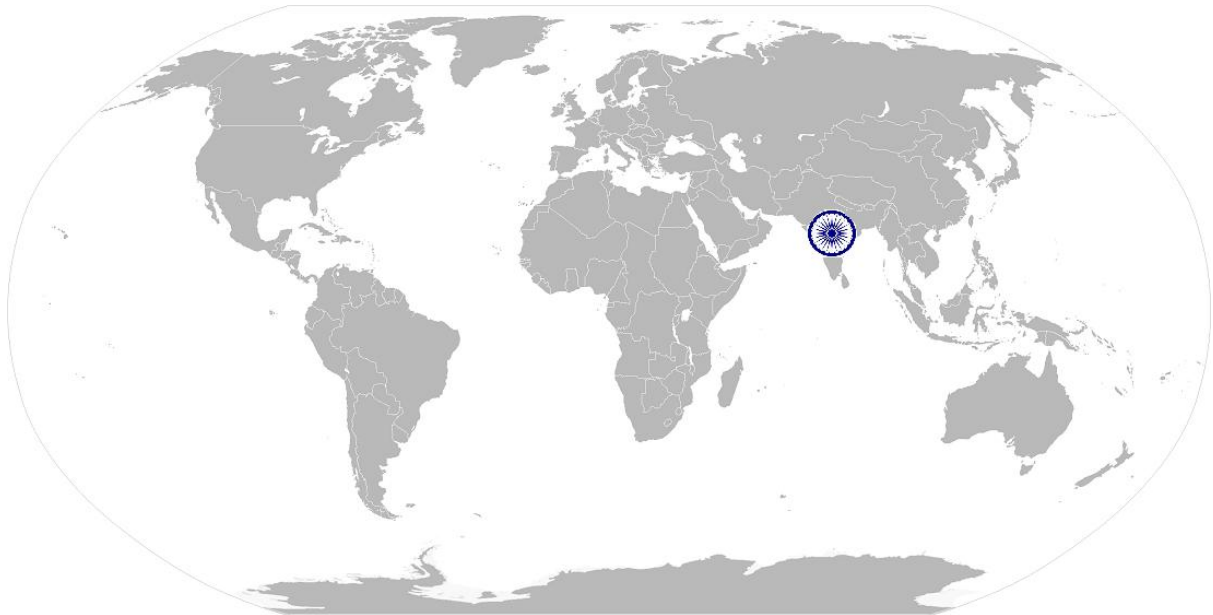


AGR /N9903

Maintain health & Safety at the work place

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# National Occupational Standard



## Overview

This unit is about dealing with health and safety of the farmers and co workers at workplace

## AGR / N9903 Maintain health & Safety at the work place

<b>Unit Code</b>	AGR/N9903
<b>Unit Title (Task)</b>	Maintain health and safety at the workplace
<b>Description</b>	This OS is for the cultivator who is responsible for maintaining health and safety of self and others co workers at workplace
<b>Scope</b>	This unit/task covers the following: <ul style="list-style-type: none"> <li>• Maintain clean and efficient workplace</li> <li>• Render appropriate emergency procedures</li> </ul>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Maintaining clean and efficient workplace</b>	<p>To be competent, the individual must be able to:</p> <p>PC1. undertake basic safety checks before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor</p> <p>PC2. work for which protective clothing or equipment is required is identified and the appropriate protective clothing or equipment is used in performing these duties in accordance with workplace policy.</p> <p>PC3. read and understand the hazards of use and contamination mentioned on the labels of pesticides/fungicides etc</p> <p>PC4. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practice.</p> <p>PC5. use equipment and materials safely and correctly and return the same to designated storage when not in use</p> <p>PC6. dispose of waste safely and correctly in a designated area</p> <p>PC7. recognise risks to bystanders and take action to reduce risk associated with jobs in the workplace</p> <p>PC8. perform your work in a manner which minimizes environmental damage all procedures and work instructions for controlling risk are followed closely.</p> <p>PC9. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger.</p>
<b>Render appropriate emergency procedures</b>	<p>To be competent, the individual must be able to:</p> <p>PC10. follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency.</p> <p>PC11. follow emergency procedures to company standard / workplace requirements</p> <p>PC12. use emergency equipment in accordance with manufacturers' specifications and workplace requirements</p> <p>PC13. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques</p> <p>PC14. recover (if practical), clean, inspect/test, refurbish, replace and store the</p>

**AGR /N9903 Maintain health & Safety at the work place**

	<p>first aid equipment as appropriate PC15. report details of first aid administered in accordance with workplace procedures.</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant legislation, standards, policies, and procedures in work KA2. relevant health and safety requirements applicable in the work environment KA3. own job role and responsibilities and sources for information pertaining to work KA4. who to approach for support in order to obtain work related information, clarifications and support KA5. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business KA6. documentation and related procedures applicable in the context of work</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. personal hygiene and fitness requirements KB2. your general duties under the relevant health and safety legislation KB3. what personal protective equipment and clothing should be worn and how it is cared for KB4. the correct and safe way to use materials and equipment required for your work KB5. the importance of good housekeeping in the workplace KB6. safe disposal methods for waste KB7. methods for minimizing environmental damage during work KB8. the risks to health and safety and the measures to be taken to control those risks in your area of work KB9. workplace procedures and requirements for the treatment of workplace injuries/illnesses. KB10. basic emergency first aid procedure KB11. local emergency services KB12. why accidents, incidents and problems should be reported and the appropriate action to take</p>
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. mention the data which are required for record keeping purpose SA2. report problems to the appropriate personnel in a timely manner SA3. write descriptions and details about incidents in reports</p>
	<b>Reading Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA4. read instruction manual for hand tool and equipments</p>

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**Maintain health & Safety at the work place**

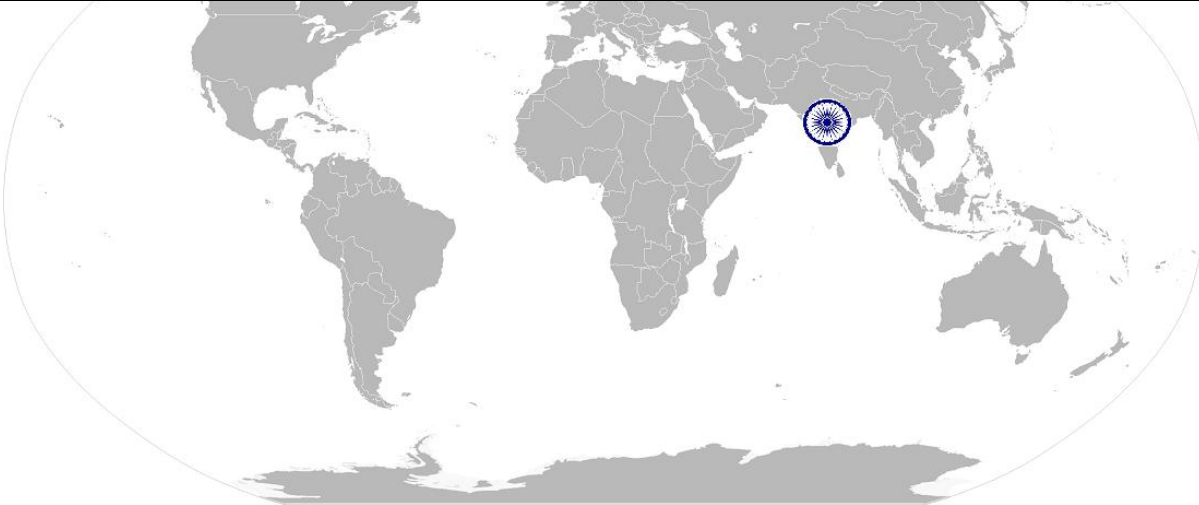
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. communicate clearly and effectively with others like farmers, concerned officer/stakeholders</p> <p>SA6. comprehends information shared by senior people and experts</p>
<b>B. Professional Skills</b>	<b>Decision Making</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. make decisions pertaining to types of tools to be used</p> <p>SB2. identify need of first aid and render it accordingly</p>
	<b>Plan and Organize</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. schedule daily activities and drawing up priorities; allocate start times, estimation of completion times and materials, equipment and assistance required for completion.</p>
	<b>Customer Centricity</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB4. manage relationships with co-workers and managers of the who may be stressed, frustrated, confused or angry</p>
	<b>Problem Solving</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB5. identify problems immediately and take up solutions quickly to resolve delays</p>
	<b>Analytical Thinking</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB6. monitor and maintain the condition of tools and equipment</p> <p>SB7. assess situation &amp; identify appropriate control measures</p>
<b>Critical Thinking</b>	
<p>The individual on the job needs to know and understand how to:</p> <p>SB8. take up one's own learning</p>	

**AGR /N9903**

**Maintain health & Safety at the work place**

**NOS Version Control**

<b>NOS Code</b>	<b>AGR/N9903</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	<b>Agriculture And Allied</b>	<b>Drafted on</b>	<b>25/02/14</b>
<b>Sub-sector</b>	<b>Agriculture Crop Production</b>	<b>Last reviewed on</b>	<b>14/06/17</b>
<b>Occupation</b>	<b>Farm Machinery, Equipment Operation And Maintenance</b>	<b>Next review date</b>	<b>14/06/21</b>

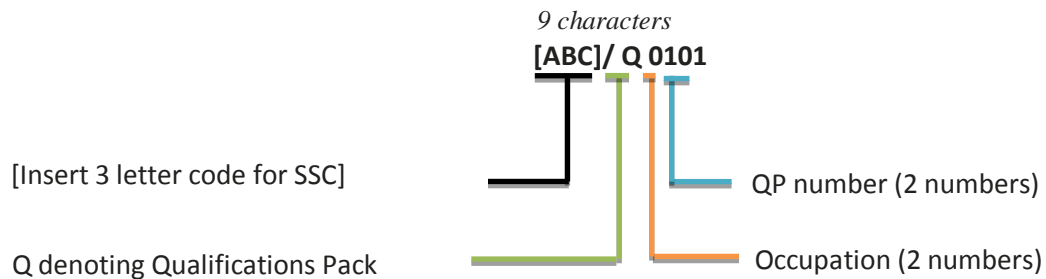


## Qualification Pack For Tractor Operator

### Annexure

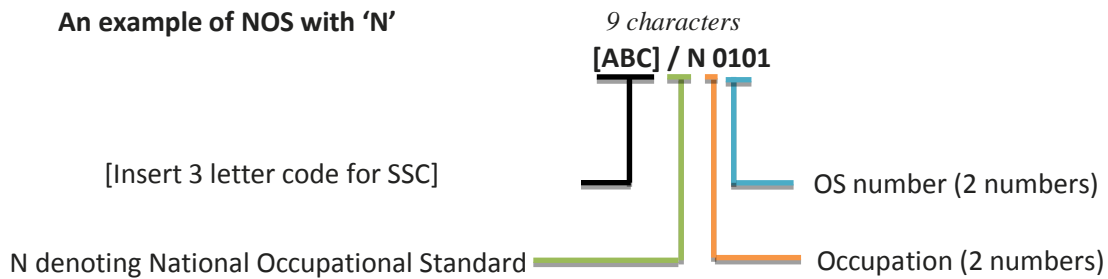
#### Nomenclature for QP and NOS

##### Qualifications Pack



##### Occupational Standard

##### An example of NOS with 'N'



### Qualification Pack For Tractor Operator

Sub-sector	Range of Occupation numbers
<b>Agriculture Crop Production</b>	<b>01 – 40</b>
<b>Dairying</b>	<b>41 – 42</b>
<b>Poultry</b>	<b>43 – 44</b>
<b>Animal Husbandry</b>	<b>45 – 48</b>
<b>Fisheries</b>	<b>49 – 51</b>
<b>Agriculture Allied Activities</b>	<b>52 – 60</b>
<b>Forestry, Environment and Renewable Energy Management</b>	<b>61 - 70</b>
<b>Agriculture Industries</b>	<b>71 – 90</b>
<b>Generic Occupations</b>	<b>96 - 99</b>

Sequence	Description	Example
<b>Three letters</b>	Industry name	AGR
<b>Slash</b>	/	/
<b>Next letter</b>	Whether QP or NOS	Q or N
<b>Next two numbers</b>	Occupation code	01
<b>Next two numbers</b>	OS number	01

Note:

- The range of occupation numbers have been decided based on the number of existing and future occupations in a segment
- Occupation numbers from 91 – 95 have been intentionally left blank to accommodate any emerging segment in future.



Qualification Pack For Tractor Operator

**CRITERIA FOR ASSESSMENT OF TRAINEES**

<b><u>Job Role</u></b>	Tractor Operator
<b><u>Qualification Pack</u></b>	AGR/Q1101
<b><u>Sector Skill Council</u></b>	Agriculture

**Guidelines for Assessment:**

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
5. To pass the Qualification Pack , every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
6. In case of *unsuccessful completion*, the trainee may seek reassessment on the Qualification Pack.

Assessment outcomes	Assessment Criteria for outcomes	Total Marks (300)	Out Of	Marks Allocation	
				Theory	Skills Practical
1.AGR/N1101 Operation of the tractor	PC1. Lubricate rear axle bearing		5	2	3
	PC2. Check engine oil level		4	2	2
	PC3. Check coolant level		4	2	2
	PC4. Drain water and sediment from fuel filter		4	2	2
	PC5. Lubricate tie rod ends				
		<b>120</b>	5	2	3

*Qualification Pack For Tractor Operator*

PC6. Lubricate Steering spindles	5	3	2
PC7. Lubricate front axle pivot pin	5	3	2
PC8. Use of ballasting as per the need	5	3	2
PC9. Operate PC & DC levers as per the need	5	3	2
PC10. Do proper gear & RPM selection	5	2	3
PC11. Classify tillage implements into Primary tillage implements, Secondary Tillage implements, levelling equipment and trailer	4	2	2
PC12. Select proper implement for a specific function	4	2	2

Qualification Pack For Tractor Operator

PC13.Take precautions before using Implements and Trailer			
	5	2	3
PC14.Select and suggest the implements as per the need of the farmer			
	5	3	2
PC15. Take up the following function:			
		0	0
·Reducing ped size	4	2	2
·Weed control	4	2	2
·Incorporation of fertilizers			
	4	2	2
·Puddling	4	2	2
·Leveling soil surface			
	3	1	2
·wheel track adjustment			
	4	2	2
· Do sway chain adjustment			
	4	2	2
·Position and adjust the Centre link			
	4	2	2
·Measure wheel slippage			
	4	2	2

### Qualification Pack For Tractor Operator

	PC1..Do Lateral & horizontal adjustments of Implements		10	5	5
	PC2..Do Hitching and unhitching the implement from tractor		10	5	5
			120	60	60
2.AGR/N1102 Tractor Maintenance	PC1. Follow intervals for routine maintenance		10	5	5
	PC2. Lubricate different parts of the tractor		10	5	5
	PC3. Follow basic operating instructions		10	5	5
	PC4.Procure maintenance tools that are certified for such operations from a recognized body.		5	2	3
	PC5. Check the engine oil		5	2	3
		<b>120</b>	5	2	3

*Qualification Pack For Tractor Operator*

PC6. Check the transmission fluid/ hydraulic oil	5	2	3
PC7. Check the coolant in the radiator/ reservoir tank	10	5	5
PC8. Ensure all the tyres have the right inflation pressure as per the usage of the tractor	5	2	3
PC9. If fittings or connections are leaking, tighten them or replace the seals.	10	5	5
PC10. Ensure proper adjustment of the brake and clutch, and make sure the brakes and clutches free play are adjusted properly	10	5	5

### Qualification Pack For Tractor Operator

	PC11. Ensure that brake paddle latch should be engaged while driving on road.		10	5	5
	PC12. Always ensure the right temperature, oil pressure and hour meter		10	5	5
	PC13. Ensure working of headlights, brake lights and horns.		5	2	3
	PC14. Always use a recommended load as suggested by the manufacturer.		5	5	0
	PC15. Attachment and detachment of Implements		10	5	5
			120	60	60
3.AGR/N9903 Maintain health & Safety at the	PC1.Undertake basic safety checks before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor	<b>60</b>	2	1	1

### Qualification Pack For Tractor Operator

workplace				
	PC2.work for which protective clothing or equipment is required is identified and the appropriate protective clothing or equipment is used in performing these duties in accordance with workplace policy.	2	1	1
	PC3.Read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants etc	5	2	3
	PC4.Assess risks prior to performing manual handling jobs, and work according to currently recommended safe practice.	5	3	2
	PC5.Use equipment and materials safely and correctly and return the same to designated storage when not in use	5	2	3
	PC6.Dispose of waste safely and correctly in a designated area	2	1	1
	PC7.Recognise risks to bystanders and take action to reduce risk associated with jobs in the workplace	5	3	2
	PC8.Perform your work in a manner which minimizes environmental damage all procedures and work instructions for controlling risk are followed closely.	2	1	1
	PC9.Report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger.	2	1	1
	PC10.Follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency.	5	2	3
	PC11.Follow emergency procedures to company standard / workplace requirements	5	2	3
	PC12.Use emergency equipment in accordance with manufacturers' specifications and workplace requirements	5	3	2
	PC13.Provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques	5	3	2

*Qualification Pack For Tractor Operator*

	PC14.Recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate		6	3	3
	PC15.Report details of first aid administered in accordance with workplace procedures.		4	2	2
			60	30	30
	<b>Total</b>		<b>300</b>	<b>300</b>	<b>150</b>



SSC	QPCode	Name of the QP	NSQF Level	Equipment Name	Minimum number of Equipment required (per batch of 30)	Unit Type	Is this a mandatory Equipment to be available at the Training Center (Yes/No)	Dimension/Specification/Description of the Equipment/ ANY OTHER REMARK
Agriculture	AGR/Q1101	Tractor Operator	4	Tractor	1	No	Y	
Agriculture	AGR/Q1101	Tractor Operator	4	Steel Rule	1	No	N	30 cm metric
Agriculture	AGR/Q1101	Tractor Operator	4	Set of Screw driver	1	No	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Tool Set	1	Set	Y	
Agriculture	AGR/Q1101	Tractor Operator	4	Hand files	1	Set	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Feeler gauge	1	set	N	20 blade (metric)
Agriculture	AGR/Q1101	Tractor Operator	4	Steel tool box with lock & key(folding type)	1	no	N	400x200x150mm
Agriculture	AGR/Q1101	Tractor Operator	4	Allen Key set of 12 pieces	1	set	Y	2mm to 14 mm
Agriculture	AGR/Q1101	Tractor Operator	4	Philips Screw Driver	1	Set	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Engineer"s square	1	Nos	N	15 cm blade
Agriculture	AGR/Q1101	Tractor Operator	4	Divider spring joint	1	Nos	N	15 cm
Agriculture	AGR/Q1101	Tractor Operator	4	Scriber	1	Nos	N	15 cm block
Agriculture	AGR/Q1101	Tractor Operator	4	Pick punch	2	Nos	N	15 cm
Agriculture	AGR/Q1101	Tractor Operator	4	Drift punch copper	1	Nos	N	15 cm
Agriculture	AGR/Q1101	Tractor Operator	4	Centre punch	1	Nos	N	10 mm x 100 mm
Agriculture	AGR/Q1101	Tractor Operator	4	Chisel cold	1	Nos	N	20 mm flat
Agriculture	AGR/Q1101	Tractor Operator	4	Chisels Cross cut	1	Nos	N	200mm x 6 mm
Agriculture	AGR/Q1101	Tractor Operator	4	Hacksaw frame adjustable	1	Nos	N	30 cm blade
Agriculture	AGR/Q1101	Tractor Operator	4	Engineer"s Stethoscope 04 Screw driver	1	Nos	N	30 cm x 9 mm
Agriculture	AGR/Q1101	Tractor Operator	4	Hand vice	1	Nos	N	37 mm
Agriculture	AGR/Q1101	Tractor Operator	4	Drill Twist (assorted)	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Drill electric hand	1	Nos	N	6-12 mm
Agriculture	AGR/Q1101	Tractor Operator	4	Washing unit	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Air Compressor	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Electric pedestal grinder with two wheel	1	Nos	N	

Agriculture	AGR/Q1101	Tractor Operator	4	Electric arc welding set portable	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Taps and Dies complete set in a box (metric) with handle.	1	set	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Hand reamer adjustable	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Tachometer	1	Nos	N	upto 5000 rpm
Agriculture	AGR/Q1101	Tractor Operator	4	Mallets (Wooden/plastic)	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Ball peen Hammer	1	Nos	N	0.5 kg
Agriculture	AGR/Q1101	Tractor Operator	4	Cross peen Hammer	1	Nos	N	1 kg
Agriculture	AGR/Q1101	Tractor Operator	4	Spanner D E	1	Set	Y	6 mm to 32 mm
Agriculture	AGR/Q1101	Tractor Operator	4	Ring spanner	1	Set	Y	6mm to 32 mm
Agriculture	AGR/Q1101	Tractor Operator	4	Spanner, adjustable	1	Nos	N	20 cm
Agriculture	AGR/Q1101	Tractor Operator	4	Spanner adjustable (pipe wrench)	1	Nos	N	350 mm
Agriculture	AGR/Q1101	Tractor Operator	4	Spanners socket of 8 with handles, T bar and ratchet	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Chain and Pulley block	1	Nos	N	3000 Kg
Agriculture	AGR/Q1101	Tractor Operator	4	Horses and wheel choke	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Screw jack	1	Nos	N	4 ton double lift
Agriculture	AGR/Q1101	Tractor Operator	4	Hydraulic jack	1	Nos	Y	3 ton with trolley
Agriculture	AGR/Q1101	Tractor Operator	4	Oil can	1	Nos	N	0.5-liter cap
Agriculture	AGR/Q1101	Tractor Operator	4	Grease Gun Hand/Pneumatic	1	Nos	Y	
Agriculture	AGR/Q1101	Tractor Operator	4	Cleaning trays	1	Nos	Y	45 x 30 cm
Agriculture	AGR/Q1101	Tractor Operator	4	Torque wrench	1	Set	N	Set of 3
Agriculture	AGR/Q1101	Tractor Operator	4	Stud remover	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	"V" Block pair with Clamps	1	Nos	N	75 x 38 mm
Agriculture	AGR/Q1101	Tractor Operator	4	Surface plate	1	Nos		60x60 cm
Agriculture	AGR/Q1101	Tractor Operator	4	Compression testing gauge	1	Nos	Y	0 to 760 mm of Hg

Agriculture	AGR/Q1101	Tractor Operator	4	Triple leg grip puller with bearings attachment screw/hydraulic powered max	1	Nos	N	Spread 80,160,50,450 mm
Agriculture	AGR/Q1101	Tractor Operator	4	Work bench with 4 bench vices 12 cm jaw	4	Nos	Y	250 x 120 x 60 cm
Agriculture	AGR/Q1101	Tractor Operator	4	Pullers screw powered 2mm with bearing puller attachment.	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Bearing puller screw powered/hydraulic powered with attachments	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Hydrometer.	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Valve spring lifter.	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Valve key inserter	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Valve grinding tool set	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Fuel injection pump test bench with accessories	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Injector cleaning kit	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Injector dismantling & assembling jig with fixture	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Injector dismantling tool kit	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Injector testing set (hand operated)	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Engine management system's Sensors & Actuators	4	Set	N	min 1
Agriculture	AGR/Q1101	Tractor Operator	4	Wheel alignment gauge (computerized)	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Camber angle gauge	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Toe-in, toe-out gauge	1	Set	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Tyre pressure gauge	1	Nos	Y	

Agriculture	AGR/Q1101	Tractor Operator	4	Wheel balancer (computerized)	1	Nos	N	
Agriculture	AGR/Q1101	Tractor Operator	4	Fire Extinguisher (Different type)	1	Nos	N	Each
Agriculture	AGR/Q1101	Tractor Operator	4	First aid kit	1	Nos	Y	
Agriculture	AGR/Q1101	Tractor Operator	4	Tractor Trailer	1	Nos	Y	Any 1
Agriculture	AGR/Q1101	Tractor Operator	4	Mould Board Plough	1	Nos	Y	Any 1
Agriculture	AGR/Q1101	Tractor Operator	4	Harrow	1	Nos	Y	Any 1
Agriculture	AGR/Q1101	Tractor Operator	4	Seed Drill	1	Nos	Y	Any 1
Agriculture	AGR/Q1101	Tractor Operator	4	Tillage machine	1	Nos	Y	Any 1