

## OPERATE AND MAINTAIN FARM TRACTOR

**UNIT CODE: ENG/OS/AME/4/CR/01/4/A**

### UNIT DESCRIPTION

Learners will develop a practical, hands-on understanding of safe operation of farm tractors, operation of tractor systems and maintenance of selected systems of farm tractors. Learners will engage in testing and diagnostics of tractor systems for optimal performance.

### ELEMENTS AND PERFORMANCE CRITERIA

<b>Element</b>	<b>Performance criteria</b>
These describe the <b>key outcomes</b> which make up workplace function (to be stated in active voice).	These are <b>assessable statements</b> which specify the required level of performance for each of the elements (to be stated in passive voice). <b>Note: bold and italicized terms are elaborated in the range</b>
1. Perform safe operation of farm tractors	1.1 Identify and gather appropriate <b>PPE</b> as per job requirements 1.2 Identify characteristics of a safe environment for the operation of farm tractors 1.3 Perform pre-operation check on selected farm tractors 1.4 Perform safe driving of tractor
2. Operate tractor systems	2.1 Identify selected <b>tractor systems</b> 2.2 Test selected tractor systems 2.3 Perform operation of selected tractor systems
3. Perform maintenance on selected systems of farm tractors	3.1 Select appropriate <b>tools and equipment</b> for maintenance of selected tractor systems 3.2 Perform maintenance procedures for selected tractor systems 3.3 Perform routine service on selected tractor systems
4. Evaluate the performance of tractor systems	4.1 Perform basic diagnostics on selected tractor systems 4.2 Identify common malfunctions of selected tractor systems 4.3 Interpret results of the diagnostic tests of selected tractor systems
5. Perform adjustments to tractor components and systems	5.1 Perform adjustments for optimal performance of selected tractor systems 5.2 Perform tests of selected tractor systems to

	validate adjustments
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## RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. PPE (personal protective equipment) include but not limited to:	<ul style="list-style-type: none"> <li>• Dust coats/overalls</li> <li>• Gloves</li> <li>• Eye shields</li> <li>• Boots,</li> <li>• Helmets/hats</li> <li>• Masks</li> </ul>
2. Tractor systems include but not limited to:	<ul style="list-style-type: none"> <li>• Cooling system</li> <li>• Electrical system</li> <li>• Transmission system</li> <li>• Hydraulic system</li> <li>• Power take-off (PTO)</li> <li>• Lubrication system</li> <li>• Fuel system</li> <li>• Steering system</li> <li>• Hitches</li> </ul>
3. Tools and equipment include but not limited to:	<ul style="list-style-type: none"> <li>• Hand tools</li> <li>• Measuring, testing and diagnostic equipment</li> <li>• Power tools</li> </ul>

## REQUIRED SKILLS AND KNOWLEDGE

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

### Required Skills

The individual needs to demonstrate ability related to:

- Communication
- Team work
- Problem solving
- Planning and organizing
- Self-management
- Measurement
- Use of tools and equipment

### Required Knowledge

The individual needs to demonstrate knowledge of:

1. Types of tools, equipment and PPE
2. National legislation and regulations
3. Safe working practices and procedures to be followed when operating and servicing farm implements
4. Safety and environmental hazards associated with farm machinery and implements
5. Operating farm machines and implements
6. Basic maintenance and servicing of farm implements and machines

### EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: <ul style="list-style-type: none"><li>• Diagnose and adjust tractor systems</li><li>• Perform safe operation of selected farm tractor systems</li><li>• Diagnose and service farm tractor systems</li></ul>
2. Resource Implications	The following resources must be provided: <ul style="list-style-type: none"><li>• Tractor</li><li>• Land</li><li>• Farm implements</li><li>• Tools and equipment</li><li>• A functional agriculture machinery workshop</li></ul>
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Observation (performance checklist) 3.2 Oral 3.3 Written 3.4 Third party report
4. Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.