

CALIBRATE FIELD EQUIPMENT

UNIT CODE: ENG/OS/AME/4/CR/02/4/A

UNIT DESCRIPTION

Learners will demonstrate the safe operation of farm equipment, as well as calibration and servicing of farm implements in the field. Learners will engage in precision measurement activities, identify desired application and operation rates, identify adjustments to be made and field-test adjustments for optimal use of resources.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function (to be stated in active voice).	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements (to be stated in passive voice). NOTE: Bold and italicized terms are elaborated in the Range
1. Assess the condition of field equipment	1.1 PPE are identified and gathered as per job requirements 1.2 Identify and address potential safety hazards in the work environment 1.3 Perform a pre-operation check on selected farm equipment
2. Operate selected farm machines and equipment	2.1 Demonstrate procedures for hooking up and unhooking farm implements 2.2 Operate selected <i>farm implements</i>
3. Perform maintenance and service procedures on selected agricultural equipment	3.1 Select appropriate <i>tools and equipment</i> for application 3.2 Remove components to access repair or adjustment area 3.3 Perform service procedures on selected farm implements
4. Calibrate selected farm equipment	4.1 Identify the <i>farm equipment</i> 4.2 Identify desired application or operation rates 4.3 Select appropriate measurement tool 4.4 Apply the appropriate mathematical units 4.5 Apply the required mathematical principles to calculate the application or operation rate 4.6 Perform adjustment to the required rate of application or operation.

5. Optimize the operation of field equipment	5.1 Perform field test of the adjustment to the application or operation rate 5.2 Compare the actual application or operation rate to the desired application or operation rate 5.3 Evaluate whether further adjustment is needed
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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"> • Dust coats/overalls • Gloves • Eye shields • Boots, • Helmets/hats • Masks
2. Farm equipment include but not limited to:	<ul style="list-style-type: none"> • Tillage implements • Planting equipment • Spraying equipment • Harvesting equipment • Processing equipment
3. Tools and equipment include but not limited to:	<ul style="list-style-type: none"> • Hand tools • Measuring, testing and diagnostic equipment • Power tools

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">• Mount and calibrate agricultural equipment.• Perform operation of selected farm implements• Diagnose and service agricultural equipment
2. Resource Implications	The following resources must be provided: <ul style="list-style-type: none">• Tractor• Land• Tillage implements• Planting equipment• Application equipment• Harvesting equipment• Tools and equipment• A functional agriculture machinery workshop
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.