

REPUBLIC OF



KENYA

NATIONAL OCCUPATIONAL STANDARDS

FOR

ELECTRICAL OPERATOR (POWER OPTION)

KNQF LEVEL 5

ISCED CODE: 07130554 B



TVET CDACC
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NAIROBI

PERFORM WORKSHOP PROCESS

UNIT CODE: ENG/OS/PO/CC/02/6/B

UNIT DESCRIPTION

This unit covers the competencies required to perform workshop processes. Competencies include applying workshop Safety, use of workshop tools, instruments and equipments, preparation of workshop materials, preparation of workshop for Electrical installation practicals, Storage of Electrical tools and materials after practicals and troubleshoot and repair workshop tools and equipment.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
These describe the key outcomes which make up workplace function.	<i>(Bold and italicised terms are elaborated in the Range)</i>
1. Apply workshop safety	1.1 Proper use of PPE is adhered to as per standard operating procedure 1.2 Workshop rules are followed as per standard operating procedure 1.3 Proper use of safety equipments are followed as per the manufacturer's recommendations 1.4 First Aid procedures are adhered to
2. Use workshop tools, Instruments and equipments	2.1 Workshop tools , Instruments and equipments are Identified 2.2 Tools, Instruments and equipments are used as per the manufacturer's manuals 2.3 Calibration of workshop instruments are performed as per the standard operating procedure 2.4 Proper handling of workshop tools, Instruments and equipments should be followed 2.5 Care and Maintenance of workshop tools, Instruments and equipments should be adhered to
3 Prepare workshop tools and instruments for an Electrical installation practical e.g.	3.1 List of required tools and instruments are prepared 3.2 Issuing of required tools and instruments is performed 3.3 Confirmation of the issued tools and instruments is performed

ELEMENT These describe the key outcomes which make up workplace function.	PERFORMANCE CRITERIA <i>(Bold and italicised terms are elaborated in the Range)</i>
	3.4 Functioning of the issued tools and instruments is checked in line with the standard operating procedure 3.5 Sharpening of the cutting tools is performed
4 Prepare workshop for an Electrical practical	4.1 Practical working section is arranged as per the number of practicals to be carried out. 4.2 Power supply availability in every practical section is confirmed as per the practical to be carried out 4.3 Tools and materials required are supplied as per the practical to be carried out.
5 Store Electrical tools and materials after practicals	5.1 Tools are checked against the issuing list after practicals 5.2 Tools are stored out as per their standard operating procedure 5.3 Tools are cleaned as per the workshop standard operating procedure 5.4 Waste materials are disposed as per the EHS 5.5 Tools are stored in their respective sections as per the workshop procedures
6 Troubleshoot and repair/replace workshop tools and equipment	6.1 Faulty tools are identified as per their expected functioning 6.2 Faulty component are diagnosed as per the fault diagnosis procedures 6.3 Repair/Replace faulty components as per the expected functioning 6.4 Repaired/Replaced tool are tested as per the expected functioning.

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. Workshop tools may include but is not limited to:	<ul style="list-style-type: none"> • Pliers • Hacksaws • Hammer • Spirit levels • Phase Tester • Side cutters
2. Manual may include but is not limited to:	<ul style="list-style-type: none"> • Operational • Installation • Commissioning • Technical specification /data sheet
3. Parameters may include but is not limited to:	<ul style="list-style-type: none"> • Light intensity • Sound • Speed • Efficiency • Temperature • Electrical quantities e.g. Voltage, current and resistance levels • Expected output

REQUIRED SKILLS AND KNOWLEDGE

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

Required Skills

The individual needs to demonstrate the following skills:

- Communications (verbal and written);
- Proficient in ICT;
- Time management;
- Analytical
- Faults troubleshooting;
- Problem solving;
- Planning;
- Decision making;
- First aid;
- Report writing;

Required Knowledge

- How to find, interpret and use sources of technical information for workshop practical activities
- The importance of using the correct sources of technical information.
- The purpose of and how to use identification codes.
- The individual needs to demonstrate the following knowledge:
 - The manufacturer's manual about the operation of various workshop tools and instruments
 - The legal and statutory requirements relating to electrical Workshop operation activities.
 - workplace procedures relevant to:
 - health and safety;
 - the environment (including waste disposal);
 - appropriate personal and protective equipment;
 - Appropriate use of service manuals
 - Workplace procedures for:
 - Fault identification and diagnosis
 - Appropriate use of tools and equipment;
 - Repairing, modifying or replacing defective parts or components.
 - Reporting of technical challenges
 - The importance of documenting workshop practical activities and information.
 - The importance of working within agreed timelines and sharing progress reports.
 - The importance of reporting anticipated delays to relevant parties promptly.

EVIDENCE GUIDE

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

1 Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none">1.1 Adhered to the proper use of PPE1.2 Observed the workshop rules1.3 Performed the First Aid procedures in the workshop1.4 Observed workshop procedures in the storage of tools1.5 Safely used testing equipment and tools1.6 Observed EHS in the waste disposal1.7 Properly demonstrated care and maintenance of workshop tools
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	<p>1.8 Obtained, recorded and interpreted test results 1.9 Identified faulty tools and instruments 1.10 Repaired/Replaced faulty tools</p>
2 Resource Implications	<p><i>The following resources must be provided:</i></p> <p>2.1 Electrical installation tool kit 2.2 Testing equipment 2.3 Measuring equipment 2.4 First Aid kit</p> <p>Resources the same as that of workplace are advised to be applied</p>
3 Methods of Assessment	<p>Competency may be assessed through:</p> <p>3.1 Oral test 3.2 Observation 3.3 Practical demonstration</p>
4 Context of Assessment	Competency may be assessed individually in the actual workplace or through a simulated work place setting or during industrial attachment.
5 Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.