

Unit ID: 1226
Domain Title: ELECTRICAL INSTALLATION Maintain portable appliances and fixed equipment
Level: 3
Credits: 8

Purpose

This unit standard specifies the competencies required to maintain portable appliances and fixed equipment. It includes planning and preparing for work, assessing condition of appliance or equipment, replacing faulty components and completing work and cleaning up. This unit standard is intended for those who work as electricians.

Special Notes

1. Entry information:
 - Prerequisite
 - Unit 1219 - *Apply safety rules and regulations in an electrical work environment or demonstrated equivalent knowledge and skills.*
2. This unit standard is to be delivered and assessed in the context of electrical operations and should be assessed in conjunction with other relevant technical units selected from this domain.
3. To demonstrate competence, at a minimum, evidence is required of the correct interpretation signs; successful rectification of faults.
4. Assessment evidence may be collected from a real workplace or an appropriate simulated realistic environment in which electrical operations are carried out.
5. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' and company guidelines, instructions, and reasonable flat rate time.
6. Glossary of terms:
 - '*isolation and lockout procedures*' refer to isolating an electrical circuit from the source of supply
 - '*specifications*' refers to any, or all of the following: manufacturers' specifications and recommendations, workplace specific requirements, national and international standards and legislations
 - '*ISO*' refers to International Organization for Standards
 - '*SANS*' refers to South African National Standards
 - '*TT system*' refers to *terra* and *terra* where *terra* is a direct connection point to earth
 - '*TN-S system*' refers to *terra* and *neutral separate*
 - '*TN-C-S system*' refers to *terra* and *neutral combined* from the supply and then *separated* in an installation
 - '*TN-C system*' refers to *terra* and *neutral combined*.
7. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act No. 11 of 2007

- Petroleum Products and Energy Amendment Act No. 2 of 2005
- National Energy Fund Act of 2000
- Gas Act (Draft 2b)
- Occupational Health and Safety Regulations No. 18, 1997 and all subsequent amendments
- ISO 14001 (Environmental Management Standard)
- Electricity Act No.4 of 2007
- SANS 10142-1 and SANS 10142-2 electrical wiring code and all subsequent amendments to any of the above.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority on www.namqa.org and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Plan and prepare for work

Performance Criteria

- 1.1 Work instructions, including repair order forms, specifications and operational details are obtained, confirmed and applied.
- 1.2 Safety requirements are followed in accordance with safety plans and policies.
- 1.3 Tools and equipment selected to carry out tasks that are consistent with the requirements of the job, are checked for serviceability and any faults rectified or reported prior to commencement.
- 1.4 Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.
- 1.5 Environmental protection requirements are identified and applied in line with environmental plans and regulatory obligations.

Element 2: Assess condition of appliance or equipment

Range

Assessment on appliance or equipment condition includes functional testing, measurements, visual, aural and functional assessment (including damage, corrosion, leakage, wear) in line with manufacturers' requirements and specifications.

Performance Criteria

- 2.1 Portable appliance and equipment condition assessment is implemented in accordance with legislative requirements, workplace procedures and manufacturers' specification.
- 2.2 Wear measurement results are compared with manufacturers' specifications.
- 2.3 Results of portable appliance and equipment condition assessment are documented with evidence and supporting information and recommendation(s) is made in line with workplace procedures.
- 2.4 Report on portable appliance and equipment condition assessment is processed according to workplace procedures.

Element 3: Replace faulty components

Performance Criteria

- 3.1 Faulty components are identified according to manufacturer's procedures.
- 3.2 Serviceability of components is determined in line with manufacturers' specifications and workplace procedures.
- 3.3 Faulty components are replaced and tested according to manufacturer's procedures.
- 3.4 Portable appliance or equipment is commissioned according workplace procedures.

Element 4: Complete work and clean up

Performance Criteria

- 4.1 Work is completed and appropriate personnel notified in accordance with workplace procedures.
- 4.2 Work area is cleared of waste, cleaned, restored and secured in accordance with workplace procedures.
- 4.3 Reusable material is collected and stored in accordance with workplace procedures.
- 4.4 Tools and equipment are cleaned, checked and maintained in accordance with workplace procedures.
- 4.5 Work completion details are finalised in accordance with workplace procedures.

Registration Data

Subfield:	Electrical Engineering
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