

Domain**ELECTRICAL INSTALLATION****Title:****Repair portable electrical equipment****Level: 4****Credits: 6****Purpose**

This unit standard is intended for those who repair portable electrical equipment. People credited with this unit standards are able to plan and prepare for work; repair mechanical faults; repair electrical faults; and clean-up work area.

This unit standard is intended for those who work as electricians.

Special Notes

1. Entry information:

Prerequisite:

- *Unit 1157 - Demonstrate basic knowledge of workplace health and safety*

2. To demonstrate competence, at a minimum, evidence is required of repairing portable appliances. Performing these tasks requires correct identification of requirements, selection and use of appropriate processes, tools and equipment and completing all work to specification.

3. Assessment evidence may be collected from a real workplace or a simulated workplace environment in which electrical operations are carried out.

4. 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.

5. Portable appliances to include but are not limited to electrical heaters, electric fans, lawn mowers, hair driers, floor polishers, hand drilling machines, electric irons, bread toasters and electric food mixers.

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.

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
- DRAFT No.2 b (29 June 2001)
- Regulations relating to the health & safety of employees at work under Schedule 1 (2) of the Labour Act No.11 of 2007 and all subsequent amendments.
- ISO 14001 (Environmental Management Standard)
- Electricity Act No.4 of 2007
- SANS 10142-1 and SANS 10142-2 electrical wiring codes 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 plans, specifications, job cards, quality requirements and operational details are obtained, confirmed and interpreted.
- 1.2 Safety requirements are followed in line with safety plans and policies.
- 1.3 Personal protective equipment is selected in line job and safety requirements.
- 1.4 Tools and equipment selected to carry out tasks are consistent with job requirements, checked for serviceability, and any faults are rectified or reported prior to commencement.
- 1.5 Signage and barricade requirements are identified and implemented, where necessary.
- 1.6 Material quantity requirements are calculated in line with plans, specifications and quality requirements.
- 1.7 Environmental protection requirements are identified and applied in line with environmental plans and regulatory obligations.

Element 2: Repair mechanical faults

Range

Mechanical faults include but are not limited to mis-alignment of gears and shafts, broken wheels, broken drive belts, bent pulleys and damaged cams.

Performance Criteria

- 2.1 Troubleshooting procedures on mechanical faults are explained and applied.
- 2.2 Appliance malfunction is explained and the appliance is dismantled according to manufacturers' procedures.
- 2.3 Faulty mechanical part is repaired or replaced according to manufacturers' recommendations.
- 2.4 Appliance is re-assembled and tested for functionality according to manufacturers' procedures.

Element 3: Repair electrical faults

Range

Electrical faults include but are not limited open circuits, short circuits, hot spots, loose connections and burnt electrical components.

Performance Criteria

- 3.1. Troubleshooting procedures on electrical faults are explained and applied.
- 3.2. Appliance malfunction is explained and the appliance is dismantled according to manufacturers' procedures.
- 3.3. Faulty electrical component is replaced according to manufacturers' specifications.
- 3.4. Appliance is re-assembled and tested for functionality according to manufacturers' procedures.

Element 4: Clean-up work area

Performance Criteria

- 4.1 Work area is cleared, cleaned, restored and secured in line with workplace procedures.
- 4.2 Tools and equipment are cleaned, checked and stored in line with manufacturer specifications and workplace procedures.

- 4.3 Materials and wastes are disposed of, reused, or recycled in accordance with legislation, regulations, codes of practice and job specifications.

Registration Data

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