

Domain**ELECTRONICS****Title: Repair Electronics Systems And Devices****Level: 3****Credits: 30****Purpose**

This unit standard specifies the competencies required to repair electronic systems and devices. It includes Preparing to diagnose and repairing electronic system and devices, Troubleshoot Electronic system and devices, repairing and testing electronic systems and devices. This unit standard is intended for those who work in electronics industry.

Special Notes

1. Entry information:

Prerequisite

- *Unit E01 - Apply health and safety rules and regulations in electronics workplace*
- *Unit E02 - Plan and organise work in electronic work environment*

2. To demonstrate competence, minimum evidence of the ability to prepare for repair of electronic systems and devices, troubleshooting of electronic systems and devices, repairing and testing of electronic systems and devices (at least two electronic systems and devices) is required

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

4. Glossary of terms

- *'specifications' refers to any, or all of the following: manufacturers' specifications and recommendations, workplace specific requirements*

5. Electronics systems and devices to be repaired include but not limited to access control system, surveillance system, alarm system, telemetry system, computer system, monitoring and control systems, cell phone, projector, television set, radio set, computer and washing machine.

6. Regulations and legislation relevant to this unit standard include the following:

- Labour Act, No. 11, 2007
- Occupational Health and Safety Regulations No. 18, 1997
- and all subsequent amendments.

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 and the Namibia Training Authority on www.nta.com.na

Elements and Performance Criteria

Element 1: Prepare to repair electronic system and devices

Range

Repairing aids may include manuals, schematic diagrams, modification sheets, fault and service guides.

Performance Criteria

- 1.1 Fault symptoms are identified, verified against the customer's detailed fault description and recorded.
- 1.2 Agreed repair costs and turnaround period expectations are identified.
- 1.3 Site inspection is conducted and all health and safety implications are identified.
- 1.4 Hazard mitigation measures are put in place.
- 1.5 Service information is obtained from repairing aids for the commencement of repair.
- 1.6 Due diligence is applied/exercised to prevent losses or damage of accessories and/or equipment.

Element 2: Troubleshoot electronic systems and devices

Performance Criteria

- 2.1 The causes of the fault system and faulty devices are identified with the use of diagnostic techniques, tools, test instruments, and servicing data.
- 2.2 Repair feasibility is established with respect to agreed repair costs and reliability.
- 2.3 Precautionary measures are taken to prevent damage to modules/devices during the diagnostic process.
- 2.4 Diagnostic report is in accordance with company practice.

Element 3: Repair and test electronic systems and devices

Performance Criteria

- 3.1 Faulty modules/devices are replaced in accordance with service information, and where applicable, soldered joints are in accordance with industry practice.
- 3.2 System is reassembled in a manner that prevents damage and conforms to the manufacturer's layout
- 3.3 The repaired electronic system and devices are tested for safety and readiness for use and identified errors are rectified.
- 3.4 Acceptance tests are conducted and a certificate of conformity is signed.

- 3.5 Test results are documented, filed in accordance to company procedures and communicated to relevant personnel.
- 3.6 Fault repair documentation is prepared in accordance with company practice.
- 3.7 All traces of repair work are removed from devices, and in the case of on-site repairs, premises are left in their original state of cleanliness and tidiness.

Registration Data

Subfield:	Electrical Engineering
Date first registered:	
Date this version registered:	
Anticipated review:	
Body responsible for review:	Namibia Training Authority