

Title	Diagnose and repair faulty electronic office equipment to module level		
Level	4	Credits	25

Purpose	<p>This unit standard is intended for electronics technicians and covers the diagnosis and repair of electronic office equipment to module level. Excluded are personal computers and peripherals, which are covered by the unit standards listed in Guidance Information Note 4.</p> <p>People credited with this unit standard are able to: prepare to diagnose and repair electronic office equipment; diagnose faults in electronic office equipment; repair and test electronic office equipment; and complete post-repair procedures.</p>
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Classification	Electronic Engineering > Electronic Installation and Maintenance
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Available grade	Achieved
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Guidance Information

- 1 This unit standard has been developed for learning and assessment on-job.
- 2 It is recommended that competency in Unit 26725, *Demonstrate and apply knowledge of electronic product reliability and advanced electronic measurement and diagnosis*, be achieved before assessment against this unit standard is attempted, or equivalent knowledge and skills demonstrated.
3. References
 Electricity Act 1992;
 Electricity (Safety) Regulations 2010;
 Health and Safety in Employment Act 1992 and associated regulations;
 and all subsequent amendments and replacements.
- 4 Definitions
Enterprise practice – those practices and procedures that have been promulgated by the company or enterprise for use by their employees.
Industry practice – those practices that competent practitioners within the industry recognise as current industry best practice.

- 5 Range
- a Electronic office equipment includes copy machines, facsimile machines and other electronic equipment normally found in an office environment. Excluded are personal computers and peripherals.
 - b The type of diagnosis and repair work required to achieve this unit standard must include:
 - i diagnosis and repair of equipment to module level;
 - ii use of test instruments to identify faults, measure and adjust equipment, and confirm proper performance. Typical instruments include multimeters, oscilloscopes, signal generators, and signal tracers. More specialised instruments may be required depending on the nature of the equipment.
 - c Electrical, radiation, and workshop or laboratory safety practices are to be observed at all times.
 - d Measurements may be expressed in Système Internationale (SI) or Imperial units, and, where required, converted from Imperial units to SI units and vice versa.
 - e Recognised industrial standards are to be used for calculations.
 - f All activities and evidence presented for all outcomes and evidence requirements in this unit standard must be in accordance with legislation, policies, procedures, ethical codes, Standards, applicable site and enterprise practice, and industry practice; and, where appropriate, manufacturers' instructions, specifications, and data sheets.
 - g Evidence is required of at least 30 different types of repairs covering a variety of faults on a range of equipment. The number and type of equipment chosen are left to the discretion of the assessor but must be sufficient to assess competence in all outcomes of the unit standard.

Outcomes and performance criteria

Outcome 1

Prepare to diagnose and repair electronic office equipment.

Performance criteria

- 1.1 Fault symptoms are identified, verified against the customer's detailed fault description, and recorded.
- 1.2 Agreed expenditure and repair turn around time expectations are identified.
- 1.3 All site occupational safety and health implications for self and others are identified, and hazard control measures are put in place.
- 1.4 Service information is available for the commencement of repair.
 - Range typically this may include – manuals, schematic diagrams, modification sheets, fault and service guides.
- 1.5 Accessories are handled in a manner that prevents loss or damage.

Outcome 2

Diagnose faults in electronic office equipment.

Performance criteria

- 2.1 Cause of fault and faulty modules are identified using logical diagnostic techniques, tools, test instruments, and servicing data.
- 2.2 Repair feasibility is established with respect to agreed expenditure and repair reliability.
- 2.3 Modules are protected from static damage by anti-static precautions.
- 2.4 Diagnostic processes do not damage the equipment.
- 2.5 Diagnostic report is in accordance with enterprise practice.
- 2.6 General maintenance is performed in accordance with servicing data and customer expectations.

Outcome 3

Repair and test electronic office equipment.

Performance criteria

- 3.1 Faulty modules are replaced in accordance with service information, and where appropriate, soldered joints are in accordance with industry practice.

Range industry practice – joints are smooth; without short circuits, dry joints, no excess solder.
- 3.2 Equipment is reassembled in a manner that prevents damage and conforms to manufacturers' layout.

Range layout – lead dress, screw location, shields and screens, board positioning and securing, cover positioning and fastening.
- 3.3 Testing confirms electrical safety.
- 3.4 Testing confirms that the repaired equipment is ready for service.

Outcome 4

Complete post-repair procedures.

Performance criteria

- 4.1 Fault repair documentation is in accordance with enterprise practice.
- Range may include but is not limited to – workshop register, job card, invoice, order forms, warranty forms, fault manuals, fault database, instructions to customer.
Evidence of two is required.
- 4.2 All traces of servicing and repair work are removed from equipment, and in the case of on-site repairs, premises are left in their original state of cleanliness and tidiness.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 May 1996	31 December 2011
Revision	2	3 April 2001	31 December 2011
Review	3	26 July 2004	31 December 2012
Review	4	21 July 2011	31 December 2024
Review	5	24 August 2023	31 December 2024

Consent and Moderation Requirements (CMR) reference

0003

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.