

Title	Demonstrate knowledge of the operating principles and installation requirements of domestic electrical appliances		
Level	4	Credits	7

Purpose	<p>This unit standard covers the operating principles of domestic electrical appliances and is intended for use in the training of domestic electrical appliance servicing technicians.</p> <p>People credited with this unit standard are able to describe:</p> <ul style="list-style-type: none"> – legal and regulatory obligations relevant to domestic appliance servicing; – the operating principles and installation requirements of installed kitchen appliances; – the operating principles of clothes washing and drying machines; – the operating principles and installation requirements of dish washing machines; and – the operating principles of electric heaters, ranges, cook-tops, and ovens.
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Classification	Electrical Engineering > Electrical Appliance Servicing
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Available grade	Achieved
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Guidance Information

- 1 This unit standard has been developed for learning and assessment off-job.
- 2 Refrigerators, freezers, dehumidifiers, and air conditioners are covered in unit standard 18084.
- 3 References
 Consumer Guarantees Act 1993;
 Electricity (Safety) Regulations 2010;
 Electricity Act 1992;
 Fair Trading Act 1986;
 Health and Safety in Employment Act 1992, and associated regulations;
New Zealand Electrical Codes of Practice (Ministry of Business, Innovation and Employment, ISSN 0114-0663);
 and all subsequent amendments and replacements.

Outcomes and performance criteria

Outcome 1

Describe legal and regulatory obligations relevant to domestic appliance servicing.

Performance criteria

1.1 Legal and regulatory obligations pertaining to consumer rights protection are described.

Range Fair Trading Act 1986, Consumer Guarantees Act 1993.

1.2 Legal and regulatory obligations pertaining to workplace safety, including electrical safety, are described.

Range Health and Safety in Employment Act 1992; Electricity Act 1992, Electricity (Safety) Regulations 2010.

Outcome 2

Describe the operating principles and installation requirements of installed kitchen appliances.

Range including but not limited to – range hood, waste disposal unit, electro-mechanical trash compactor.

Performance criteria

2.1 The operation of installed kitchen appliances is described with reference to wiring diagrams, electrical components, and mechanical components.

Range electrical components – motor, capacitor, switch, overload, suppression circuit; speed control;
mechanical components – associated parts and accessories;
evidence of two types of installed kitchen appliances is required.

2.2 The installation requirements of typical kitchen appliances are described with reference to operational requirements, commissioning requirements, and safety.

Range operational requirements – electrical connections, mechanical fixing, pipe work;
evidence of two types of installed kitchen appliances is required.

Outcome 3

Describe the operating principles of clothes washing and drying machines.

Performance criteria

3.1 The operating principles of clothes washing machines are described with reference to methods of loading and cycles of operation.

Range top and side loading, cold and hot water filling, heating, pre-soak and soak options, wash, rinse, spin.

3.2 The operating principles of clothes drying machines are described with reference to actions and cycles of operation.

Range tumbling and non-tumbling options, heating level option, duration of drying, ventilation, lint control, thermal protection.

Outcome 4

Describe the operating principles and installation requirements of dish washing machines.

Performance criteria

4.1 The operating principles of dish washing machines are described with reference to cycles of operation.

Range cold and hot water filling, heating, rinse and hold options, wash, rinse, dry.

4.2 The installation requirements of dish washing machines are described with reference to operational requirements, commissioning requirements, and safety.

Range operational requirements – electrical connections, mechanical fixing, pipe work.

Outcome 5

Describe the operating principles of electric heaters, ranges, cook-tops, and ovens.

Performance criteria

5.1 The operating principles of electric heaters are described with reference to components and wiring diagrams.

Range electrical resistance elements, reflectors, hot black body, radiance, convection, forced air circulation, heat storage, ventilation, thermostats, thermal protective devices, tilt switches.

5.2 The operating principles of electric ranges, cook-tops and ovens are described with reference to components and wiring diagrams.

Range oven and oven elements, top plates, griller, electrical resistance elements, radiant elements, forced air circulation in ovens, oven thermostats, top plate simmerstats, timers, medium frequency magnetic induction hobs, top plates.

- 5.3 The installation requirements of electric ranges, cook-tops and ovens are described with reference to operational requirements, commissioning requirements, and safety.

Range operational requirements – electrical connections, mechanical fixing.

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	28 January 2001	31 December 2013
Review	2	20 June 2006	31 December 2022
Rollover and Revision	3	20 September 2012	31 December 2022
Revision	4	15 January 2014	31 December 2022
Review	5	28 January 2021	31 December 2022

Consent and Moderation Requirements (CMR) reference	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.