

## **Summary of guidelines for repair under the NZECP 50:2001 standards**

### **Keeping our repair Volunteers informed and safe.**

#### FOREWORD

Are you competent to be able to carry out the electrical work to which this code applies? To increase your skills in electrical work, there are training courses available at your local polytechnic or through your Community educational services or Marae. You are ONLY permitted to carry out work on 230 volt, 10 amp AC single-phase domestic electrical appliances, cord sets or extension leads.

The following extracts from the Electricity Act 1992 and Electricity Regulations 1997 are applicable to the maintenance of electrical appliances.

To obtain copies of the relevant legislation, see the website:

[www.legislation.govt.nz](http://www.legislation.govt.nz)

Electricity Act section 169 Clause 20 only shown

169. Regulations – (1) The Governor-General may from time to time, by Order in Council, make regulations for all or any of the following purposes:

(20) Prescribing the limits or scope of prescribed electrical work which any of the persons referred to in section 108 (2) of this Act, or any person to whom section 109 or section 110 or section 111 or section 112 of this Act applies, may do or assist to do:

## **What we can do at a repair café - key phrase being highlighted in yellow and aqua**

Electricity Act section 111

111. Exemption for maintenance of domestic appliances – (1)

Notwithstanding anything in section 108 of this Act, the owner of any electrical appliance may do any prescribed electrical work, or assist in doing any prescribed electrical work, in relation to that appliance, if–

- (a) The appliance is kept principally for the use of that person, or any near relative of that person, or both; and
- (b) The appliance is used principally for domestic purposes and not for commercial or industrial purposes; and
- (c) The work is within the limits prescribed in regulations made under section 169 of this Act for the purposes of this section; and
- (d) The work is carried out in accordance with the requirements of any regulations made under section 169 of this Act; and
- (e) The work is carried out in a competent manner; and
- (f) While that work is being carried out, the appliance is not connected to a power supply; and
- (g) Where required by regulations made under section 169 of this Act, the work is tested and certified by a registered electrical inspector in accordance with regulations made under that section before connection to a power supply.

(2) For the purposes of subsection (1) of this section, the term “near relative”, in relation to any person, means–

- (a) A grandparent of that person:
- (b) A parent (including a step-parent) of that person:
- (c) A parent (including a step-parent) of that person's spouse:
- (d) A brother or sister of that person, including a half-brother or half-sister:

(e) That person's spouse, which for the purposes of this section includes any person (including a person who is of the same gender as the first-mentioned person) with whom the first-mentioned person is living in a relationship in the nature of marriage although those persons are not legally married to each other:

(f) A child (including a stepchild) of that person:

(g) A child (including a stepchild) of that person's spouse:

(h) A grandchild of that person.

Electricity Regulation 17 (2)(n)

### **17. Prescribed electrical work**

**(2) The following work is deemed not to be prescribed electrical work:**

(n) Work done on low voltage fittings, where—

(i) The work consists of—

(A) The replacement of a fuse link with a fuse link or plug-in miniature circuit-breaker of appropriate rating; or

(B) Affixing a fitting (being a plug, an adaptor, a cord extension socket, or an appliance connector) of an appropriate rating to a flexible cord that is designed to have such a fitting affixed to it; and

(ii) There is in force in respect of the work a standard set by the Secretary for the purpose; and

**(iii) The work is done in a competent manner, without payment or reward, and in accordance with that standard.**

For the purposes of Regulation 17 (2)(n), section 3 and Appendix A of this code are deemed to meet the Secretary's requirements.

### **Electricity Regulation 48**

#### **48. Maintenance of domestic appliances**

For the purposes of section 111 of the Act, the owner of any electrical appliance may do any prescribed electrical work, or assist in doing any prescribed electrical work, in relation to that appliance, provided that the work is carried out in accordance with the requirements of ECP 50.

### **Requirements for appliances used in New Zealand**

**Sustainability Trust will have licenced electricians and trained Test and Tag staff on hand to ensure the below legislation is being followed and all repair work leaves being tested and tagged.**

In New Zealand all electrical appliances must include a nameplate identifying its voltage (V), and either its current (I) or wattage (W), and indicate whether the appliance is double insulated. If the appliance is double insulated it will show the symbol, a square box within a square box, see Figure 1 (Page 7). The nameplate may also contain other information relevant to the appliance.

Typical information that could be found on a Nameplate:

Volts or voltage (V) = 230 V

Current (I) = 4.4 A

Wattage (W) = 1000 W

Double insulation = square box within a square box

There are two types of electrical appliance in New Zealand:

Earthed electrical appliances (These types of electrical appliances are called Class I appliances).

These types of electrical appliances have a connection to earth, which means that any exposed metal of the appliance is connected to earth (e.g. toaster, electric iron etc). They have a power supply cord with 3-wires, brown, blue and green/yellow, and are fitted with a 3-pin plug.

Double insulated electrical appliances (These types of electrical appliances are called Class II appliances).

These types of electrical appliances will NOT have any connection to earth. This means that the exposed metal (e.g. electric drill) has a physical barrier between any metal and the electrical components. They have a power supply cord with 2-wires, brown and blue, and are fitted with a 2-pin plug.

## Section 1: INTRODUCTION

### **What we cannot/should avoid - repair**

#### 1.1 GENERAL

##### **1.1.1 DO NOT attempt to carry out repairs or maintenance on:**

- (a) 110 V electrical appliances using this code. 110 V electrical appliances MUST not be used as they are not designed for use with the electricity supply in New Zealand. If these electrical appliances are connected to the 230 V electricity supply, the appliance may become damaged or cause an electrical hazard.
- (b) 230 V electronic appliances. There are electrical hazards associated with these (i.e. television sets, radio and audio, micro-waves and computers, etc) that are outside the scope of this Code. Only licensed electrical workers should carry out repairs to electronic appliances that have a 230 V power supply. The main reason that appliance owners cannot carry out this type of work themselves is that the appliance, when opened, contains parts that have very high dangerous voltages (e.g. 15,000 V DC).
- (c) Electrical appliances with a current rating in excess of 10 A, 2,300 W.
- (d) Electrical appliances under warranty, as this will make the warranty invalid. The warranty card should tell you what action needs to be taken. The Consumer

Guarantees Act also provides protection for consumers purchasing faulty goods.

(e) Electrical appliances that fall under the categories of paragraphs (a) and (b) of clause 1.1.5.

## **More info on the Code**

1.1.2 This Code does not outline the detailed requirements for the repair of individual electrical appliances.

1.1.3 This Code outlines the basic requirements for ensuring work is carried out safely, and includes the testing of electrical appliances, cords, and extension leads before re-using them.

This Code aims to ensure that there will be no electrical hazard created after the electrical appliance, cord, or extension lead has been repaired.

1.1.4 If you are the owner of a domestic electrical appliance, cord set, or extension lead that is for your own private use, then you are permitted to carry out repairs and maintenance on that appliance, cord set or extension lead in accordance with this Code. This Code applies to single-phase appliances or plugs, sockets or appliance connectors (fittings) that are labelled in the range from 220 volts (V) to 250 V.

1.1.5 For all new electrical appliances, you will need to follow the manufacturer's recommendation on whether or not it is designed to be repaired. Recently made electrical appliances fall into three categories:

(a) non-repairable (do not attempt any repairs on this appliance);

(b) no supply cord replacement (do not attempt to repair the supply cord); or

(c) full repair can be carried out.

1.1.6 If the electrical appliance is repairable and falls under 1.1.5 (c) above and manufacturer's instructions are available to carry out any of the repair work, follow those instructions and the appropriate requirements of this Code.

1.1.7 This Code includes advice on how to repair a rewirable fuse link or replace a cartridge fuse, and how to replace a fuse carrier with a plug-in circuit-breaker. It covers the correct procedures for resetting a circuit-breaker or a residual current device (RCD) and gives the time frame for regularly testing RCDs, see Appendix A.

1.1.8 This Code also provides some basic electrical safety tips in and around your home, see Appendix B.