



## Electrical Equipment and Appliances Standard Operating Procedure

### 1. Purpose

The Scout Association of Australia, Queensland Branch Inc., have a legal obligation to comply with the requirements of the *Electrical Safety Act 2002* for use at eliminating the human cost to individuals, families and the community of death, injury and destruction that can be caused by electricity. The *Electrical Safety Code of Practice 2013*, directs management of electrical risks in the workplace and a practical guide to achieving the standards of electrical safety.

The *Queensland Work Health and Safety Act 2011*, requires persons who have a duty to ensure health and safety to 'manage risks' by eliminating health and safety risks so far as reasonably practicable.

Therefore, Central Coast Region operated facilities must have procedures in place that ensure the electricity supply facilities (distribution boards, RCDs, wiring and power points) and plug-in type electrical equipment are inspected and maintained in a safe condition and that there is an electrical safety management program in place.

For most of the electrical equipment used at Central Coast Region operated facilities the requirements for inspection, testing and tagging are to be determined by the risk management process. The Australia/New Zealand Standard AS/NZS 3760 "In-service safety inspection and testing of electrical equipment" should be used as a guide.

### 2. Scope

To set directions, procedures and practices for Central Coast Region operated facilities which contribute to the ongoing safety of all workers and visitors regarding the use of the electricity supply and electrical appliances.

To ensure Central Coast Region operated facilities comply with the requirements of the *Electrical Safety Act 2002*, the *Queensland Work Health and Safety Act 2011*, AS 3000 and AS 3760:2010.

To establish and maintain a register of electrical assets and the test dates.

Test and tag all electrical items and test RCDs (Residual Current Devices) and undertake regular visual inspections, preventative maintenance etc. All electrical items will be tested and tagged on a cyclic basis as part of the overall electrical safety management.

To remove all non-compliant equipment from service.



## 3. Procedure

### 3.1 Use of Electrical Appliances

All electrical equipment in use at Central Coast Region operated facilities should be designed and manufactured to appropriate Australian safety standards. Electrical equipment that has been modified is not permitted to be used at Central Coast Region operated facilities as this type of equipment does not meet the requirements of AS 3000.

Everyone using electrical equipment must do a visual inspection of the equipment and the power point to check for any faults or damage before each use. Light and fan switches must also be visually inspected before use. If a fault or damage is detected, the electrical item, power point or switch must not be used and must be taken out of service and reported to the ARC Campsites.

All electrical equipment should be used in accordance with the manufacturer's instructions.

### 3.2 Hostile Environments

In "hostile environments" where electrical equipment is being used, it is recommended that the person who has control of that work area undertake a risk assessment to identify potential injury, harm, or electric shock. Examples of areas where this should be considered are:

- Wet Areas
- Workshops
- High Traffic Areas (both foot and vehicle)
- Areas where youth members are present

### 3.3 Hired or Leased Electrical Equipment

Any person who brings into Central Coast Region operated facilities hired or leased electrical equipment is to ensure that the equipment meets the requirements of this procedure. It is their responsibility to ensure that hired or leased electrical equipment is maintained in good working order during use within the hire or lease period, and that electrical tags are current at the time of use.

### 3.4 Residual Current Devices (RCD's) / Safety Switches

All Central Coast Region operated facilities are to have fixed safety switches and Residual Current Devices (RCD) installed, where this is inappropriate for plant and or equipment, portable safety switches are to be used, in accordance with AS 3000 and AS 3012.

Portable RCDs should be positioned to provide protection to any extension leads in use with portable equipment. All Portable RCDs shall be checked and tested in accordance with the requirements of the current edition of AS 3760. Periodic testing of these units may be arranged through the ARC Campsites.

### 3.5 Use of Electrical Radiators

The use of portable electric heaters is **NOT PERMITTED** anywhere in Central Coast Region operated facilities.



## 3.6 Use of Multiple Adaptors or Power Boards

“Piggy back” plug tops and “Double adaptors” **SHALL NOT** be used anywhere at Central Coast Region operated facilities.

Where a Power Board is required to be used, it will be of a type that incorporates a cut out button rated at no more than 10 Amps. Under no circumstances shall a power board be plugged into a second power board.

Household type Power Boards shall not be used to supply portable power tools.

## 3.7 Inspections and Testing & Tagging

The purpose of inspection and/or testing and tagging is to detect any adverse condition that could make equipment unsafe, for example, frayed cords or exposed live parts. Examples of equipment to which this applies include: all types of electrical power tools, electrical kettles, microwave ovens, plug-in air conditioners, heaters, toasters, vacuum cleaners, televisions, projectors, computers, extension leads, power boards etc.

Regular inspection and/or testing of electrical equipment will occur. It should be noted that not all equipment requires the same frequency of testing. Equipment needing testing will be determined the table shown in Table A-1 in Appendix A.

The electrical test tag must include the identity of the person carrying out the testing and the test date and may be colour coded to identify the period in which the test was performed.

Electrical inspections and/or testing of fixed appliances at Central Coast Region operated facilities will at all times be completed by an authorised qualified electrical tradesperson. In the case of testing and tagging, a person competent and authorised to use a Portable Appliance Tester (PAT) may be engaged to complete this task. A PAT is an electronic instrument that automatically tests equipment plugged into it. Testing is to be in accordance with AS 3760 *“In-service safety inspection and testing of electrical equipment”*.

Annual inspection and/or testing of the condition and status of RCDs (portable and fixed), distribution boards and sub-boards will occur. This work will be completed by an authorised qualified electrical tradesperson. Installation or replacement of power points or RCDs and repairs or upgrades to electrical circuits, distribution boards and sub-boards will be carried out by an authorised qualified electrical tradesperson.

The ARC Campsites (or delegate) will liaise with the person undertaking the inspection, testing & tagging tasks and provide all relevant information to assist the person to perform the required work. This may mean ensuring all equipment is available for inspection and testing on the day and that the equipment is placed conveniently for the tester and all newly acquired equipment is available.

### 3.7.1 New Electrical Items

AS 3760 indicates new items conforming to the relevant Australian standards do not need to be tagged and tested before use but once put into service will become part of the ongoing testing and tagging process. However, new electrical equipment installed at Central Coast Region operated facilities are required to be tagged prior to use with the date first put into service, and the details recorded in the electrical testing and inspection documentation.



## 3.7.2 Personal Electrical Equipment

Privately owned electrical equipment that is brought into Central Coast Region operated facilities must not be used unless a current Electrical Test Tag is visible on the portable electrical device. Permission to use personal electrical equipment on site must be sort from the ARC Campsites or the Region Commissioner prior to use.

## 3.8 Records of Inspections, Testing and Electrical Work Carried Out

Results of all inspections and or testing will be managed by the ARC Campsites. These records should include the type of equipment, date of inspection, clear identification of the equipment tested, the identification of the person carrying out the tests and the findings of the test.

Equipment identified as non-compliant will be withdrawn from service and either repaired, tested and tagged or disposed of in a safe manner.

## 3.9 Procedures for Reporting Electrical Hazards

If any person at Central Coast Region operated facilities becomes aware of or suspects an electrical hazard they shall immediately act to ensure the safety of themselves and others by reporting the hazard to the ARC Campsites or the Region Commissioner as per the *Emergency Procedures (QB-CCR-SOP-09)*. The person reporting the hazard shall remain in the area where the hazard has been identified but at a safe distance and location to ensure that no person comes into contact with the hazard.

The report of any electrical hazard should include the following information:

- specific location of the hazard
- the nature of the hazard
- any other action taken in relation to the hazard

The electrical item in question should be immediately disconnected from the electricity supply (if this is safe and/or practical to do) withdrawn from service and inspected by a person qualified to make an assessment of its safety. It may be appropriate that it is then cleared for use, repaired, tested and tagged or disposed of in a safe manner.

The ARC Campsites will determine if it was a Dangerous Electrical Event (DEE) or a Serious Electrical Incident (SEI) and report it to the relevant authorities (including the Region Commissioner) in a timely manner. An incident report for (F18) will also be completed and sent to Scouts Australia QLD Branch in a timely manner. Further investigations may be undertaken by Scouts Australia QLD Branch or an external authority.

If an item is withdrawn from use due to concerns over its electrical safety (faulty or damaged) it will be appropriately 'tagged out' of service. The tag should be placed so as to provide clear visual indication that the appliance is not to be used. If the device is portable it should be removed from use, tagged out of service and stored in a secure place until it can be assessed by a qualified person.

## 3.10 Maintenance and Repair of Electrical Items

Maintenance and repair of any electrical item is to be carried out by a person/contractor who is qualified and authorised to carry out such work.

Any electrical item requiring maintenance or repair is to be removed from service, tagged with an "Out of



Service” tag and the ARC Campsites notified.

It is strictly prohibited for unlicensed/un-authorized persons to affect any repairs or modifications to any electrical equipment or wiring at Central Coast Region operated facilities. Only persons authorised by the ARC Campsites are permitted to carry out electrical work at Central Coast Region operated facilities.

### 3.11 Non-compliant Equipment

Electrical appliances which are non-compliant with the inspection and testing procedures must be tagged with an “Out of Service” tag to warn against further use and withdrawn from service to ensure they cannot be used.

Equipment not intended for re-use should be made incapable of being connected to the electrical supply by breaking the electrical socket pins (using pliers) and cutting the (disconnected) electrical supply cord as close as possible to the appliance, prior to disposal.

Repair of equipment should be undertaken by authorised repair agents or suitably qualified electrical tradesperson. Equipment that has been repaired must be inspected and tested and tagged prior to re-introduction to service.

## 4. Audit and Review

The individual Standard Operating Procedure will be reviewed:

- Three yearly.
- When triggered by any event or findings that identify improvements in the controls that effectively manage the identified hazards.

## 5. Definitions

**Competent Person** – Person assessed as being able to perform a task.

**Dangerous Electrical Event (DEE)** – Section 12 of the *Electrical Safety Act 2002* defines a DEE and includes when a person, for any reason, is electrically unsafe around high voltage electrical equipment, even if the person doesn't receive an electric shock or injury, significant property damage caused by electricity or something originating from electricity e.g. electrical fire, unlicensed electrical work, unsafe electrical work, unsafe electrical equipment or electrical equipment that does not have electrical equipment safety system (EESS) approval markings. **A DEE is reportable to WHS QLD as soon as possible.**

**Electrical Equipment/Appliance** – An electricity consuming device or apparatus (including the cable) that is connected to or capable of being connected to the electrical installation. Electrical appliances can be classified into one of the following categories:

- Portable electrical equipment – equipment that is connected to an electrical supply and intended to be moved when in use, e.g. electric arc welder, electric high pressure water cleaner;
- Hand-held – portable equipment that is intended to be held in the hand during normal use and the electrical motor forms an integral part of the equipment, e.g. electric drill, angle grinder (excludes battery operated equipment);





- Movable – an appliance that can be moved readily from one place to another by unplugging from a general-purpose outlet, but that is not moved during operation, e.g. cathode ray oscilloscope, electronic balance, personal computer, printer, etc.
- Fixed/stationary – an appliance which is, in normal use, fastened to a support of otherwise secured in a specific position or is of such size or function as to be difficult or unlikely to be moved from one place to another, e.g. large workshop machinery (lathe, band saw, etc.), oven, refrigerator.

**Electrical Installation** – All wiring, wiring enclosures switchgear, control and protective gear appliances and any other component permanently connected to or associated with the wiring that is on premises to which electricity is or intended to be supplied through a distribution network.

**Electrical Work** – Connecting electricity supply wiring to electrical equipment or disconnecting electricity supply wiring from electrical equipment; or Manufacturing, constructing, installing, removing, adding, testing, replacing, repairing, altering or maintaining electrical equipment or an electrical installation.

**Electric Portable Device Outlet (EPDO)** – A device having a single plug intended for connection to a mains outlet socket, a (EPDO) sheathed flexible cord and an assembly of one or more outlet (Power Board) sockets. It may incorporate a reeling or coiling arrangement.

**Personal Protective Equipment (PPE)** – Clothing equipment and/or substances which, where worn or used correctly, protects part or all of the body from foreseeable risks of injury or disease in the workplace.

**Portable Appliance Tester (PAT)** – A PAT is an electronic instrument that automatically tests equipment plugged into it

**Residual current device (RCD)** – is an electrical safety device that constantly monitors the electrical current flowing through a circuit. RCDs are installed in building electrical distribution boards but are also available as a portable plug in device. If an RCD senses a loss of current where electricity is being diverted to earth (as might happen if a person touches a live conductor), it immediately shuts down the power and protects against severe electric shock.

**Responsible Person** – A person who has the demonstrated skills and knowledge required to perform a task to a standard.

**Rule** – A rule is a rule or Regulation made for the carrying out of requirements of the Workplace Health and Safety Act.

**Serious Electrical Incident (SEI)** – Section 11 of the *Electrical Safety Act 2002* defines a SEI and includes where a person is killed by electricity, receives a shock or injury from electricity, and is treated for the shock or injury by or under the supervision of a doctor, receives a shock or injury from electricity at high voltage, whether or not the person is treated for the shock or injury by or under the supervision of a doctor. **An SEI is reportable to WHS QLD as soon as possible.**

**Shall and Should** – The word “shall” is to be understood as mandatory and the word “should” as non-mandatory advised or recommended.

**SOP** – Standard Operating Procedure

**Workplace** – A place where employees work or are likely to be in the course of their work.



## 6. Document Information

### 6.1 Reference Information

Reference information, listed in **Table 6-1** below, is information that is directly related to the development of this document or referenced from within this document.

| Reference                                  |
|--|
| Queensland Branch Scouting Instructions    |
| QB-CCR-SOP-09 – SOP for Emergency Response |
| Australian Standards (AS 3000, AS 3760)    |
| Queensland Electrical Act                  |
| Electrical Safety Code of Practice 2013    |

**Table 6-1 - Reference Information**

### 6.2 Change Information

Full details of the document history are recorded in the document control register, by version. A summary of the current change is provided in **Table 6-2** below.

| Version | Date       | Review Team      | Details of Change |
|---------|------------|------------------|-------------------|
| 1.0     | 08/08/2017 | Dougal McWhinney | Document created  |

**Table 6-2 - Reference Information**



## Appendix A

### A.1 Testing and Inspection Intervals for Electrical Equipment

**CAUTION:** This table must be read in conjunction with AS 3760 as a whole, and particularly *clause 2.1*.

| Type of environment and/or equipment<br>(a)   | Interval between inspection and tests   |  |           |                                     |           |
|---|---|--|-----------|-------------------------------------|-----------|
|   | Equipment including Class I equipment, Class II equipment, cord sets, cord extension sets and EPODs<br>(b)          | Residual current devices (RCDs)                          |           |                                     |           |
|   |   | Push-button test – by user                               |           | Operating time and push-button test |           |
|   |   | Portable (c)   | Fixed (d) | Portable (e)                        | Fixed (f) |
| 1 Factories, workshops, places of work or repair, manufacturing, assembly, maintenance or fabrication   | 6 months  | Daily, or before every use, whichever is the longer      | 6 months  | 12 months                           | 12 months |
| 2 Environment where the equipment or <b>supply flexible cord</b> is subject to flexing in normal use OR is open to abuse OR is in a <b>hostile environment</b>                    | 12 months   | 3 months   | 6 months  | 12 months                           | 12 months |
| 3 Environment where the equipment or <b>supply cord</b> is NOT subject to flexing in normal use and is <b>NOT</b> open to abuse and is <b>NOT</b> in a <b>hostile environment</b> | 5 years   | 3 months   | 6 months  | 2 years                             | 5 years   |
| 4 <b>Residential type areas</b> of: hotels, residential institutions, motels, boarding houses, halls, hostels accommodation houses, and the like                                  | 2 years   | 6 months   | 6 months  | 2 years                             | 2 years   |
| 5 Equipment used for <b>commercial cleaning</b>   | 6 months  | Daily, or before every use, whichever is the longer      | N/A       | 6 months                            | N/A       |
| 6 <b>Hire equipment:</b><br>Inspection<br><br>Test and tag  | Prior to hire   | Including push-button test by <b>hirer</b> prior to hire |           | N/A                                 | N/A       |
|   | 3 months  | N/A  |           | 3 months                            | 12 months |
| 7 Repaired, serviced and second-hand equipment  | After repair or service which could affect electrical safety, or on reintroduction to service, refer to AS/NZS 5762 |  |           |                                     |           |

Table A-1



# Be Prepared!



## A.2 Test and Tag Record Sheet

| Site:                            |          |                             |                   |                    |                            |                             |                          |
|----------------------------------|----------|-----------------------------|-------------------|--------------------|----------------------------|-----------------------------|--------------------------|
| Equipment ID number/ Description | Location | Date of inspection and test | Result: Pass/Fail | Action to be taken | Person completing the test |                             | Date for next inspection |
|                                  |          |                             |                   |                    | Name                       | PAT Certificate / License # |                          |
|                                  |          |                             |                   |                    |                            |                             |                          |
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