



AUSTRALIAN CAMPS ASSOCIATION

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Electrical Testing and Tagging

May 2018

Question:

Must I by law carry out a regular testing and tagging process, or do I need to employ a specialist company to do this for me? And anyway, is electrical testing and tagging a legislated requirement?

Response:

The Australian Standard forms a Regulation, rather than Legislation.

However, if the equipment is not safe and causes an accident, the employer / owner (**Responsible Person** – see definitions below) and the person who provided the appliance may be liable.

It is the task of the **Responsible Person** to have all portable electrical appliances tested by a **Competent Person**.

Testing intervals and regimes vary for each state but summaries can be found below.

Supporting information

What Is AS/NZS 3760?

The **AS/NZS 3760 In service safety inspection and testing of electrical equipment** is an Australian Standard whose main goal is to ensure workplaces are safe by setting out recommendations in relation to testing 240V, 3 phase and low voltage electrical equipment.

Specifically, these recommendations focus on topics that range from Test and Tag frequencies, inspection and testing specifications, record keeping and other general guidelines. This extends to any equipment or appliances brought into the workplace i.e. battery charger, laptop chargers, electric drill etc.

Although we have a National Standard to follow, within Australia we also have the respective State/Territory Regulator Bodies that are responsible for ensuring that organisations comply with the requirements.



What tests are required under the Test and Tag Standard?

Visual Testing

Approximately 90% of faults are identified from visual inspection prior to the completion of the any electrical tests. A true visual inspection, conducted by a reputable service provider involves a comprehensive inspection of flexible supply cord, plug, appliance and socket. Covers and guards are checked to ensure they are attached, appliances are checked for rattles indicating the presence of small foreign objects that may interfere with the electrical safety of the appliance, and Class II appliances are checked for deep engraving which may impact on the insulation of the appliance.

Insulation Resistance

An Insulation Resistance test is required to check the integrity of the insulation that is protecting users from the live parts within the appliance. In the majority of cases, an Insulation Resistance Tester, or PAT (Portable Appliance Tester) is used to complete the insulation resistance test on an appliance. *Note: the Standard does not mandate the use of such a device.*

Some items contain a soft switch which means that current must be applied to the item – effectively turning the item on or “powering it up” – on order for it to be tested. A **Leakage Current Test** should be completed on items with a soft switch.

Leakage Current Testing

This test involves "powering up" the appliance and measuring any current leakage. To conduct this test, the tester must be connected to the mains power so the use of a battery powered PAT to complete this test is impossible.

Polarity

A polarity test is conducted on leads with rewire able plug or socket to check the active and neutral wires are connected correctly. Whilst testing polarity using a Multimeter or Insulation Resistance Tester is slow and complex, a PAT completes this test quickly and efficiently whilst also testing for short circuits between conductors.

Earth Resistance

An earth resistance test will confirm whether the earth connection of the equipment, between the plug and exposed external metal parts, or the plug and the socket, is no greater than 1 ohm. One method of testing this is to conduct an earth continuity test but as that test does not take in to account any damage to the earth connection or conductor it is less effective than an earth bond test.

An earth bond test be conducted by a PAT applies a higher current to determine whether in the event of a fault, the equipment can handle that fault current correctly, and to measure earth resistance.

Definitions

Competent Person

A competent person is one who the responsible person ensures has the necessary practical and theoretical skills, acquired through training, qualification, experience or a combination of these to correctly undertake the required tasks. A competent person is not required to be a licenced electrical practitioner, except in Queensland.

Refer Appendix B of the *Standard* for guidelines to assist a responsible person assess the knowledge of a competent person.

RCD

Residual Current Device. A mechanical switching device designed to make, carry and break current under normal service conditions.

Responsible person

The owner of the premises, or the owner of the equipment, or the person with legal responsibility for the safety of electrical; equipment.

References

AS/NZS 3760:2010 *In service safety inspection and testing of electrical equipment.*

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Table 4 : Testing and Inspection Intervals for Electrical Equipment

CAUTION - This information *must* be read in conjunction with AS/NZS 3760:2010 as a whole, and particularly Clause 2.1

Type of environment and/or equipment (a)	Interval between inspection and tests				
	Equipment including Class I equipment, Class II equipment, cord sets, cord extension sets and EPOD's (b)	Residual Current Devices (RCD's)			
		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, which ever is the longer	6 months	12 months	12 months
2 Environment where the equipment or supply flexible cord is subject to flexing in normal use OR is open to abuse OR is in a hostile environment	12 months	3 months	6 months	12 months	12 months
3 Environment where the equipment or supply cord is NOT subject to flexing in normal use and is NOT open to abuse and is NOT in a hostile environment	5 years	3 months	6 months	2 years	2 years
4 Residential type areas of hotels, residential institutions, motels, boarding houses, halls, hostels, accomodation houses, and the like	2 years	6 months	6 months	2 years	2 years
5 Equipment used for commercial cleaning	6 months	Daily, or before every use, which ever is the longer	NA	6 months	NA
6 Hire Equipment	Inspection	Prior to hire	Including push-button test by hirer prior to hire	NA	NA
	Test and Tag	3 months	NA	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				

For a no obligation quote on your electrical safety testing, please contact us on 1300 287 669 or office@ats.com.au
 You may also need to refer to the Electrical Safety Regulations or WHS Regulations in your state of operation for additional detail on your responsibilities

Appliance Tagging Services Pty Ltd

		<ul style="list-style-type: none"> • 3 monthly Push Button test • 12 monthly Operating Time Test
Lower risk ('Non- Hostile – WA) operating environments (eg general office areas – equipment NEVER moved)	Test and Tag	<ul style="list-style-type: none"> • Recommend to test every 5 years in accordance with AS/NZS 3760:2010 • 5 yearly by a Competent Person • 5 yearly OR all circuits protected by a safety switch • 5 yearly by a Competent Person
	Fixed RCD Test	<ul style="list-style-type: none"> • 6 monthly Push Button test • 2 yearly Operating Time Test
	Portable RCD Test	<ul style="list-style-type: none"> • 3 monthly Push Button test • 2 yearly Operating Time Test
Accommodation	Test and Tag	<ul style="list-style-type: none"> • 2 yearly in accordance with AS/NZS 3760:2010 • 2 yearly by a Competent Person • 2 yearly by a Competent Person
	Fixed RCD Test	<ul style="list-style-type: none"> • 6 monthly Push Button test • 2 yearly Operating Time Test
	Portable RCD Test	<ul style="list-style-type: none"> • 6 monthly Push Button test • 2 yearly Operating Time Test
Commercial cleaning	Test and Tag	<ul style="list-style-type: none"> • At least 6 monthly by a competent person
	Fixed RCD Test	<ul style="list-style-type: none"> • N/A
	Portable RCD Test	<ul style="list-style-type: none"> • Daily or before each use Push Button test • 3 monthly Operating Time Test
New Equipment		Upon entry to service should be inspected for damage and tagged with a New to Service tag indicating it has not been tested and the date it will be tested

Note:

In QLD all testing can be conducted by a Competent Person however the Competent Person must also hold a **Registered Electrical Contractors Licence**.