

TEST AND TAG

People have been caught out with a 'one size fits all' approach to testing and tagging. For example, the equipment used in a workshop of a Manufacturing facility should be tested on a 6 monthly basis, and unscrupulous test and tag providers have been known to test the entire facility on a 6 monthly basis. It's no wonder some businesses believe Testing and Tagging is simply an on cost!

By Sarah Allan, Appliance Testing Services

Testing and tagging is one element of electrical safety that has caused confusion and controversy since its inception. People believe it to be an important part of a comprehensive electrical safety management system; some people believe it to be a waste of time and simply an on cost to businesses across Australia; and then there are those that believe it to be an important only in a Construction environment. But the facts remain, even in a non Construction environment, up to 10% of appliances fail first round testing, and many of these appliances have the potential to kill.

The standard that applies in this area – AS/NZS 3760:2010 In-Service Safety Inspection and Testing of Electrical Equipment – was completely revised in 2010. This revised standard specifies the safety inspection and maintenance standards for Australia and New Zealand, and can assist in complying with OH&S legislation. It is vital to remember that the Standard should be read in conjunction with state specific legislation as testing and retesting requirements detailed in legislation vary from state to state.

SO, WHAT ARE THE ACTUAL REQUIREMENTS?

In Victoria, the OH&S Act 2004 specifies that "An employer so far as reasonably practicable, provide and maintain for employees a working environment that is safe and without risk to health". The Victorian Electrical Safety Act 1998 also states that all second hand equipment being made available for sale must be inspected tested and tagged prior to sale. Similar legislation also exists in Tasmania and in South Australia where the testing of RCD's in accordance with AS/NZS 3760 is detailed.

NSW OH&S Regulations 2001 are far more prescribed, and in fact, in NSW, the regulations were taken so much to heart by some businesses, that an amendment to the OH&S regulations was issued in 2006 to clarify which appliances and environments need to be part of an ongoing testing and tagging program. The NSW regulations now state all appliances located in a Construction environment and a Hostile operating environment must be inspected tested and tagged regularly by a Competent Person and a record maintained of the testing. All items not located in these environments should be the subject of a documented risk assessment, which may in fact recommend the testing and tagging of the appliance.

A whole article could be written on the complexity and intricacies of testing and tagging in QLD. The legislation surrounding Testing and Tagging is covered by the Electrical Safety Act 2002 and the amendment issued in 2006, and is exceptionally detailed. QLD legislation is based on 6 "Classes of Work", and dictates the retest frequencies associated with the testing of appliances within each class of work. The 6 classes of work are categorised as Construction Work, Manufacturing Work, Office Work, Service Work, Amusement Work and Rural Industry Work. The legislation also specifies the requirements of RCD installation and testing under AS/NZS 3760, along with requirements surrounding double adaptors and piggy back plugs for different classes of work.

In addition, it is also a requirement under the QLD Electrical Safety Act for a test and tag service provider to hold a Restricted Electrical Contractors license and for all technicians to have successfully completed a nationally recognised competency based Test and Tag course.

When the newly revised standard, AS/NZS 3760:2010 was launched in Australia in October 2010, it contained a number of modifications on the previous standard.

RESPONSIBLE PERSON

The new Standard makes specific references to the responsibilities of 'the responsible person' to ensure the competency of technicians undertaking a test and tag program.

The responsible person is the owner of the premises, equipment or, under the relevant OH&S Act, is deemed to be responsible for the safety of the workplace.

One of the most important areas of competency is the understanding of the Standard, and I encourage all 'responsible persons' to ensure their test and tag provider owns a current copy of the Standard and understands the changes.

RETESTING FREQUENCIES (TABLE 4)

Table 4 of AS/NZS 3760:2010 has been reviewed and now aligns more closely with the NZ Electricity (Safety) Regulations 2010. There are 3 changes to Table 4 worth highlighting.

In order to reduce confusion within manufacturing environments, no longer are there different retesting time frames for Class I and Class II equipment. Therefore all portable electrical equipment located in a manufacturing environment is now subject to retesting every six months.

The 'Cord extension sets and EPODs' column has been removed, and now incorporated into one column along with Class I and Class II items.

Portable RCD's used in commercial cleaning are now required to be tested by the 'push button' daily or prior to use (whichever is longer) and an operating time test conducted every 12 months.

It is important to note that as the QLD Electrical Safety Regulations specify retesting time frames based on 'Classes of Work', QLD based test and tag technicians should continue to refer to the QLD Electrical Safety Regulations for detail on retesting time frames.

ITEMS WITH FUNCTIONAL EARTHING

The new Standard makes reference to equipment with functional earthing. Care should be taken when conducting an earth bond test to ensure the functional earth is not being tested. A functional earth is not designed for safety, but the internal operation of the equipment and may give an incorrect test result. In addition, the completion of an earth bond test on a functional earth may place the equipment in danger.

LEAKAGE CURRENT TESTING

The Standard now includes additional information for leakage current tests on Class II single-phase and three-phase equipment. It also includes leakage current test methodology for equipment that is normally immersed in water.

3 PHASE RCD'S

New guidance information has been added to the Standard for the testing of three phase residual current devices (RCDs) and electrical equipment. This has been added to improve technician safety.

INFORMATION ON TAG

AS/NZS 3760:2010 now specifies that the retest date must be added to the durable, non-reusable, non-metallic tag placed on the item after testing. This is in addition to the requirement for Technician/ Company Name, Test or Inspection Date, and whether the item passed or failed testing.

This addition has been made to assist workplaces in easily identifying when their appliances are due for retesting.

LEASED EQUIPMENT

Whilst the 2003 standard made many references to the requirements for hired equipment, there was no reference to the requirements for the testing and tagging of leased equipment.

In order to clarify, AS/NZS 3760:2010 now states that the hiree or the leasee is responsible for the inspection testing and tagging of hired and leased equipment whilst the equipment is in their possession. The equipment should be inspected tested and tagged by the hiree or leasee in accordance with the retest frequencies detailed in Table 4 of AS/NZS 3760:2010.

For example, traditionally leased appliances such as Vending Machines, Water Coolers, Computers, Photocopiers and the like must now be inspected tested and tagged in accordance with Table 4 of AS/NZS 3760:2010 by the leasee while the equipment is in their possession.

APPLIANCES WITH REMOVABLE CORD SETS

AS/NZS 3760:2010 notes specifically that for equipment supplied with a cord set, the intention of the Standard is for the cord set and the equipment to be tested and tagged separately.

For example, a Kettle with a removable IEC lead would consist of 2 tests. One test for the Kettle, with a tag applied to the kettle. And one test for the IEC lead, with the tag applied to the plug end of the IEC lead.

Should you engage a test and tag service provider I highly recommend you confirm the technician owns a copy of the new Standard and completely understands the impact of the revisions.

Any experienced test and tag provider knows that regardless of the state and type of Industry, the majority of items fail visual testing alone. The first step in the test and tag process is for each item to be examined visually for defects and faults, and an appliance is only ever electrically tested after it has passed this visual test. The majority of items that fail this visual test are still in use, and often the user of the equipment is horrified that it has been deemed no longer safe to use.

I often use the example of a dripping tap when it comes to explaining the importance of electrical safety to people. A dripping tap is noticeable, not life threatening, but noticeable. The tap will drip faster and faster until it gets fixed, and usually it is repaired before the washers are completely destroyed. Unlike water, electricity is not visible. Most people don't really understand it, and most people have an "it won't happen to me" attitude when it comes to electric shock.

We had a client explain to us recently that she thought the radio she had brought into the office from home was safe to use even though we had failed it because of exposed wiring at the rear of the unit. Her pet rabbit, which had been gnawing on the lead over the last few months when it was in operation at home, had met with no harm when he bit it, so she had assumed that it was safe to use at work.

When it comes to workplace safety, all employers have an obligation to provide a safe workplace – whether the equipment in question is personal or work related. This is regardless of the attitudes and misconceptions of their staff with regards to electricity, and their sometimes blatant disregard of the seriousness of an electric shock.

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