



ELECTRICAL INSPECTION AND TESTING FREQUENTLY ASKED QUESTIONS

Why must electrical equipment be inspected, tested and maintained?

Employers have a duty of care to ensure that employees and visitors to the workplace are safe from injury and risks to health. Therefore any safety risks surrounding electrical hazards must be managed in accordance with the requirements of the NSW *Work Health and Safety Act 2011* and *Work Health and Safety Regulation 2017*.

A systematic risk management approach must be applied to eliminate or control the risk of electrical hazards. After the risk assessment, a range of control measures can be implemented including:

- routine visual checks;
- regular inspection;
- maintenance;
- repair;
- replacement;
- use of residual current devices (RCDs);
- and, where warranted, testing of identified electrical equipment.

Does all electrical equipment have to be tested and tagged?

No. Testing and tagging is required for electrical equipment that is supplied with electricity through an electrical socket outlet, and are used in construction and demolition sites or in higher-risk operating conditions. These are conditions that are likely to result in damage to the equipment or a reduction in its expected life span.

What types of environments require testing?

Environments that require testing include those which expose the equipment to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust. Examples include wet or dusty areas, outdoors, workplaces that use corrosive substances, commercial kitchens and manufacturing environments.

Note: due to the nature of the work conducted in some laboratories and workshops, they may be considered a higher-risk operating environment. Assessment of your workplace should be carried out to determine if it is considered a higher-risk operating environment under the WHS Regulation.

Are there any special requirements for serviced or repaired electrical equipment?

Yes. Electrical equipment that has been serviced or repaired which could have affected electrical safety must be inspected, tested and tagged in accordance with the requirements of the [UOW Electrical Safety Guidelines](#) prior to the equipment being placed back into service. In addition, any second-hand electrical equipment received must be tested before its first use.

Who can inspect and test electrical equipment?

The inspection and testing of electrical equipment must be done by a 'competent person' as defined in the *WHS Regulation 2017*. A 'competent person' must be:

- A licensed or registered electrician, or
- A licensed electrical inspector, or
- A person who has completed a structured training course and been competent in the use of appliance testers and the visual inspection of electrical equipment.

Regardless of who does the work the person must be authorised by the employer and must be adequately trained and instructed to do the work. Moreover, the person authorising the work must make sure that the inspection and testing program is appropriate and adequate for the needs of the workplace.

Some electrical inspection and testing tasks require a degree of technical expertise and interpretation of results and therefore can only be carried out by appropriately qualified personnel, such as a licensed electrician or electrical inspector

If in doubt, the person authorising the inspection and testing program must obtain advice from a person qualified in electrical matters, an electrician, electrical contractor or specialist testing provider.

How can I organise for electrical equipment to be tested and tagged?

To arrange a competent person to test and tag electrical equipment please email electrical-testing@uow.edu.au or alternatively the WHS Unit can be contacted on extension 3931 or whs-admin@uow.edu.au.

Does new electrical equipment require testing?

No. With new electrical equipment the supplier is deemed responsible for the electrical safety of the new equipment in accordance with the principles of safe design and manufacture.

It is therefore not necessary for an employer to test new equipment before its first use, but a 'competent person' should still visually inspect the equipment to ensure no damage has occurred during shipment or commissioning.

Following the inspection, the [UOW Electrical Safety Guidelines](#) recommend that the new equipment that has been assessed as requiring future testing be fitted with a tag stating that the equipment is 'new to service', and the date of entry into service. This action sets a baseline date to work with for future electrical inspection and testing activities.

Does stationary electrical equipment require testing?

No. Stationary or fixed equipment connected by a fixed cable or flexible cord which is not flexed in normal use or exposed to damage, nor is in a higher-risk operating environment, is not normally considered to represent a hazard sufficient to warrant routine in-service electrical safety testing. Subject to the outcome of a risk assessment, the testing of such equipment is not normally required.

- *fixed equipment* is equipment that is fastened to a support, secured in position or otherwise due to its size and mass located in a specific location
- *stationary equipment* is equipment having a mass exceeding 18 kg and not provided with carrying handle(s).

Where flexible cable or cord is flexed on equipment that is moved only for restocking, maintenance, or cleaning, in-service testing is required. It is sufficient to conduct only a visual inspection and earth test on such fixed or stationary equipment.

What electrical equipment should be inspected, tested and tagged?

Some electrical equipment may be used in a situation that poses a risk to the operator due to the nature of its location and the type of use.

If a risk assessment shows there is a risk to employees and others, the employer should ensure the equipment is inspected, tested and tagged in accordance with the recommendations of the [UOW Electrical Safety Guidelines](#).

The categories in the following table list plug-in type electrical equipment that is commonly used in higher-risk operating environments and does require regular inspection and testing, and provides examples of the types of electrical equipment.

Examples of electrical equipment that does require regular inspection and testing

Note: This table should be used as a guide only.

CATEGORY OF EQUIPMENT	EXAMPLES OF ELECTRICAL EQUIPMENT TO BE TESTED
Hand held electrical equipment	<ul style="list-style-type: none"> ▪ Hand held power tools ▪ Hairdryers ▪ Kitchen appliances ▪ Laboratory equipment
Portable electrical equipment moved while in operation	<ul style="list-style-type: none"> ▪ Floor polishers ▪ Vacuum cleaners ▪ Portable lighting equipment
Electrical equipment that is moved between operations in such a manner that could damage the flexible supply lead	<ul style="list-style-type: none"> ▪ Portable electronic whiteboards ▪ Overhead projectors ▪ Laptop computers ▪ Electrical plant used in factory type environments ▪ Welding machines ▪ Extension cords ▪ Power boards
Electrical equipment that is used in a higher-risk operating environment where damage to the equipment or the electricity supply to that equipment could occur such as in wet or dusty conditions.	<ul style="list-style-type: none"> ▪ Electrical equipment used in wet or dusty areas ▪ Electrical equipment used outdoors ▪ In kitchens ▪ Laboratories (chemical damage) ▪ Certain factory-type environments

Do I have to 'test and tag' my desktop computers and office electrical equipment?

No. Not all electrical equipment requires regular testing. In some situations electrical equipment such as desktop computers and stationary office equipment does not present a risk to their operators. This is due to:

- the permanent nature of their location
- the working environment in which the equipment is used.

In cases like these, a risk assessment should be carried out in accordance with the [UOW Risk Management Guidelines](#). The assessment should determine whether desktop computers, and other similar stationary office equipment, warrant regular testing and tagging as recommended by the [UOW Electrical Safety Guidelines](#).

Do I have to 'test and tag' my portable heater used in my office?

Not all electrical equipment requires regular testing. You can keep using the portable fan heaters providing they are safe. As the fan heaters are in an office environment we recommend that a visual inspection be conducted on the unit to determine if there are any exposed wires or any other damaged components. If there are unsafe issues identified then the unit should be taken out of service and have it electrical tested and tagged and either repaired or disposed of. The purchase of new heaters should be in accordance with UOW Purchasing and FMD guidelines.

Related Documents

- [Electrical Safety Guidelines](#)