St Mary's University Twickenham London

Electrical Safety and Portable Appliance Testing

HSPG 16 (Version 3) – August 2017

St Mary's University
Waldegrave Road, Strawberry Hill, Twickenham TW1 4SX
Switchboard 020 8240 4000
Fax 020 8240 4255
www.stmarys.ac.uk

1.0 Statement of Policy:

The Electricity at Work Regulations 1989 came in to force on 1st April 1990. The Regulations are made under the Health & Safety at Work Act 1974 and require precautions to be taken to prevent death or personal injury from electricity in work activities. The Regulations impose responsibilities on the employer and employees to conform to these regulations in every respect. The testing of electrical equipment is an inherent part of compliance with these regulations, therefore, the Institute of Electrical Engineers (I.E.E.) have issued a Code of Practice for in-service inspection and testing of Electrical Equipment (called the I.E.E. Code of Practice).

St Mary's University shall take all reasonable steps to ensure that all portable appliances are tested in accordance with the relevant I.E.E. Code of Practice, and to facilitate this shall provide all training and equipment necessary to carry out tests and provide a satisfactory means of recording data.

2.0 Definition of Portable or Transportable Appliances:

There is no universally accepted definition of what is meant by portable or transportable electrical equipment. However, in this policy it means equipment that is not part of a fixed installation, but is intended to be connected to a fixed installation, or a generator, by means of a flexible cable and either a plug and socket, or a spur box, or similar means. This includes equipment that is either hand-held or hand-operated while connected to the supply, intended to be moved while connected to the supply, or likely to be moved while connected to the supply. The electrical supply to the equipment is assumed to be at a voltage that can give a fatal electrical shock to a person, i.e. more than 50 V ac or 120 V dc.

Examples of portable equipment include: tools and extension leads in the construction industry (high-risk); grinders and hand lamps in general manufacturing (medium-risk); and floor cleaners and metal-bodied kettles in offices (medium-risk). Extension leads, plugs and sockets, and cord sets that supply portable equipment, are classified as portable equipment because they operate in the same environment and are subject to the same use as the equipment they serve.

Note: The word 'portable' is used subsequently to mean both portable and transportable.

Only equipment fitted with a plug, rated between 110 and 500 volts ac, and allowing disconnection from the electrical supply without the use of a tool, will fall within the scope of this Portable Appliance Testing policy.

The University will ensure that the guidelines stated in HS(G) 107: 2013 'Maintaining portable and transportable electrical equipment' are followed.

Table 1 from HS(G) 107: 2013 sets out the suggested frequency of formal visual inspections, combined inspections and electrical tests for portable and transportable electrical equipment. It gives suggested starting intervals when implementing a maintenance programme. Where one figure is given, this is a guide for anticipated average use conditions; more demanding conditions of use will require more frequent formal visual inspections, and/or combined inspections and tests. Where a range is shown, the small interval is for more demanding conditions of use and the longer interval is for less demanding ones. Facilities Management Services, with appropriate advice where necessary, will assess the conditions affecting equipment, which may lead to potential damage and/or deterioration and will determine the maintenance regime.

Table 1 Suggested initial maintenance intervals

Type of business		User checks	Formal visual inspection	Combined inspection and test
Equipment hire		N/A	Before issue/after return	Before issue
Battery operated equipment (less than 40 V)		No	No	No
Extra low voltage (less than 50 V ac), telephone equipment, low-voltage desk lights		No	No	No
Construction	110V equipment	Yes, weekly	Yes, monthly	Yes, before first use on site then 3-monthly
	230V equipment	Yes, daily/every shift	Yes, weekly	Yes, before first use on site then monthly
	Fixed RCDs	Yes, daily/every shift	Yes, weekly	Yes, before first use on site, then 3-monthly (portable RCDs – monthly)
	Equipment site offices	Yes, monthly	Yes, 6-monthly	Yes, before first use on site then yearly
Heavy industrial/high risk of equipment damage (not construction)		Yes, daily	Yes, weekly	Yes, 6–12 months
Light industrial		Yes	Yes, before initial use then 6-monthly	Yes, 6–12 months
Office information technology rarely moved, eg desktop computers, photocopiers, fax machines		No	Yes, 2–4 years	No if double insulated, otherwise up to 5 years
Double insulated ⧈ (Class II) equipment moved occasionally (**not** hand-held), eg fans, table lamps		No	2–4 years	No
Hand-held, double insulated ⧈ (Class II) equipment, eg some floor cleaners, some kitchen equipment		Yes	Yes, 6 months – 1 year	No
Earthed (Class I) equipment, eg electric kettles, some floor cleaners		Yes	Yes, 6 months – 1 year	Yes, 1–2 years
Cables, leads and plugs connected to Class I equipment, extension leads and battery charging equipment		Yes	Yes, 6 months – 4 years depending on type of equipment it is connected to	Yes, 1–5 years depending on the equipment it is connected to

All equipment not included in this definition must be identified by School and Service Managers and brought to the attention of the Facilities Management Services for inclusion on the Fixed Wiring Testing Register.

Notes for Table 1:

Cables, leads and plugs connected to Class II equipment should be maintained as part of that equipment. Cables leads and plugs not dedicated to an item of equipment should be maintained as individual items as appropriate.

Over time, when you look at the results of user checks, formal visual inspections and portable appliance tests you will notice trends. These may tell you that you need to look at or test electrical equipment more or less often, depending on the number of problems being found.

If electrical equipment is grouped together for testing at the same time, you should use the shortest testing interval in the group rather than the longest. Alternatively, it may be appropriate to group your electrical equipment by testing interval.

The IET Code of Practice has a similar table but with the information presented in a slightly different manner. In some instances with more detail and specifics, however, the two sets of information are considered to be consistent with each other.

The University will ensure that the guidelines stated in INDG236(rev3), published 09/13 'Maintaining portable electric equipment in low-risk environments' are followed.

You must maintain electrical equipment if it can cause danger, but the law does not say how you must do this or how often. You should decide the level of maintenance needed according to the risk of an item becoming faulty, and how the equipment is constructed. You should consider:

- the increased risk if the equipment isn't used correctly, isn't suitable for the job, or is used in a harsh environment; and
- if the item is not double insulated, for example some kettles are earthed but some pieces of hand-held equipment, such as hairdryers, are usually double insulated.

This includes any electrical equipment your employees use at work, whether it is their own or supplied by you. You have a joint responsibility to maintain any equipment used by your employees that is either leased (e.g. a photocopier) or provided by a contractor (but not equipment both provided and used by a contractor).

You will need to check periodically if any work needs doing. How you do this depends on the type of equipment.

Table 2 Suggested initial intervals for checking portable electrical equipment

Equipment/environment	User checks	Formal visual inspection	Combined inspection and testing
Battery-operated: (less than 40 volts	No	No	No
Extra low voltage: (less than 50 volts AC): Telephone equipment, low-voltage desk-lights	No	No	No
Desktop computers, VDU screens	No	Yes, 2–4 years	No if double insulated, otherwise up to 5 years
Photocopiers, fax machines: Not hand-held. Rarely moved	No	Yes, 2–4 years	No if double insulated, otherwise up to 5 years
Double insulated ⧈ (Class II) equipment: Not hand-held. Moved occasionally, eg fans, table lamps	No	Yes, 2–4 years	No
Double insulated ⧈ (Class II) equipment: Hand-held, eg some floor cleaners, some kitchen equipment	Yes	Yes, 6 months – 1 year	No
Earthed equipment (Class I): Electric kettles, some floor cleaners, some kitchen equipment and irons	Yes	Yes, 6 months – 1 year	Yes, 1–2 years
Cables (leads and plugs connected to the above) and mains voltage extension leads and battery-charging equipment	Yes	Yes, 6 months – 4 years depending on the type of equipment it is connected to	Yes, 1–5 years depending on the type of equipment it is connected to

Notes for Table 1

- Cables, leads and plugs connected to Class II equipment should be maintained as part of that equipment. Cables, leads and plugs not dedicated to an item of equipment should be maintained as individual items as appropriate.
- Over time, when you look at the results of user checks, visual inspections and, where appropriate, portable appliance tests, you will notice trends. These may tell you that you need to look at or test electrical equipment less (or more) often, depending on the number of problems being found. Some examples of how to do this are shown on our website (www.hse.gov.uk/electricity/faq-portable-appliance-testing.htm).
- If electrical equipment is grouped together for testing at the same time, you should use the shortest testing interval in the group rather than the longest. Alternatively, it may be appropriate to group your electrical equipment by testing interval.

3.0 Organisation and responsibilities:

3.1 All School/Service Managers shall:

- Be responsible for ensuring that all portable electrical appliances in their charge are examined and tested in accordance with the Regulations and withdrawn from use if found to be unsafe.

- Ensure that the risks to personnel are assessed and records of inspections and tests are maintained.

- Be responsible for ensuring that members of staff appointed to test portable electrical appliances are competent to undertake the duties imposed upon them.
- Be responsible for ensuring that electrical equipment located in their School/Department, which falls outside the scope of this policy, is brought to the attention of the Facilities Helpdesk.

4.0 Competency of Appliance Testers:

Members of staff selected to undertake testing duties will be made fully aware of their responsibilities and of the consequences involved should they fail to carry out their duties in a prescribed manner. Training is required for all members of staff who undertake to carry out the testing of portable electrical appliances.

5.0 All Employees:

St Mary's University undertakes to inform all staff of their duties under the Regulations and provide appropriate training where required. It is the duty of all employees who use any electrical equipment to ensure that it is free from any visible damage and supports a valid test label. Where any visible damage is present then the equipment must be taken out of use until inspected by a competent person and any defects which may be dangerous rectified. If the equipment does not have a valid test label then the employee shall inform her/his line manager who will then contact the relevant testing section.

Employees wishing to bring their own equipment to site must first inform their line manager and make arrangements to have that equipment tested (if it does not already carry a valid certificate of inspection). A record of the appliance must be made and it must be identified as personal equipment. Should the equipment be faulty then it shall be removed from the site.

Any breach of these duties by a member of staff may lead to disciplinary action by St Mary's University.

6.0 Visitors:

Equipment belonging to and used by persons visiting the University must be in an electrically safe condition. The University reserves the right to prohibit the use of any electrical equipment brought onto the campus by a visitor which does not appear to meet this requirement.

7.0 Contractors:

Equipment belonging to and used by contractors of the University must have a valid test certificate or label attached which is available for inspection upon request by any University employee. If the equipment does not possess relevant safety documentation it will not be allowed onto the St Mary's University campus.

8.0 Students:

The Student Services Manager will ensure that resident students wishing to bring their own electrical equipment into the student accommodation are aware that any electrical appliance they bring on to the premises must conform to current safety standards, and is maintained in such a condition so as to prevent danger to themselves or others, or damage to University property.

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