



HSP 62 Electrical safety

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Briefings

Having read this procedure all key points must be communicated to all staff that inspect electrical equipment.

If you require any further assistance in the development of the team talk please contact your Safety, Health, Environment & Quality Manager.

1. Introduction

Electricity can kill or seriously injure people and can cause significant damage to property. Poor electrical installations and faulty electrical appliances can lead to a fire within a care home.

2. The problem

It is estimated that 25% of all fires are caused by faulty electrical equipment. Failure to maintain equipment is a major cause of electrical accidents involving portable equipment. The likelihood of accidents occurring and their severity will vary depending on the type of electrical equipment, the way in which it is used and the environment it is used in.

The hazards associated with electricity are:

- Contact with live parts causing shock and burns.
- Faults which could cause fire.
- Ignition source for flammable substances (eg LPG gas or oxygen).

3. What the Regulations require

The Regulations require that any electrical equipment with the potential to cause injury is maintained in a safe condition. Inspection of all portable electrical equipment should be completed according to minimum frequencies identified in this document.

Fixed wiring within a care home must be inspected every 5 years.

4. Assessing the risk

The risk of injury from portable equipment is related to a number of factors: -

- type of equipment – double insulated equipment is less likely to cause an electric shock.
- Equipment that is held by hand or handled when switched on will present a greater degree of risk because, if it does develop a dangerous fault, the person holding it will almost certainly receive an electric shock.
- Portable equipment and the electrical connections to it (eg the plug and flexible cable and its terminations) are likely to be subjected to, and more vulnerable to, physical damage and wear or harsh treatment in use than equipment which forms part of the fixed installation. Repeated flexing of the cable will eventually cause the conductor to fracture and the sheath to crack. Damage usually occurs first at the cord grip or gland where the cable enters the equipment or its plug. The damage is usually apparent at the user check and should be reported.
- Some portable equipment (such as floor polishers, hedge trimmers, saws and soldering irons) is capable of causing damage to the sheath, or even to the insulation of its own flexible cable. The cable should be secured in such a way that it does not come into contact with parts that are moving or hot.

Equipment such as computers, printers, photocopiers etc does not present the same level of risk as other equipment (such as vacuum cleaners) providing the leads and plugs are protected from mechanical damage or stress. Movement, and therefore damage through being moved, is less likely to occur, and the equipment is often double insulated and used in a dry, clean environment with non-conducting floors.

5. Definition of electrical equipment

Fixed wiring

Fixed wire installations are electrical services and systems that conduct electricity around a building. They include all hard wiring in a building and include items such as main panels, distribution boards, lighting, socket outlets, air conditioning and other fixed plant.

Portable electrical equipment

A portable or movable electric appliance is any item that can be moved, either connected or disconnected from an electrical supply. Portable or movable items generally have a lead (cable) and a plug.

Earthed equipment (Class I)

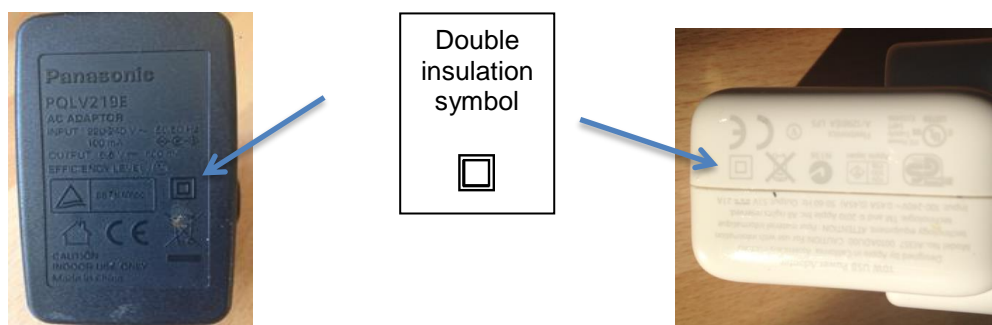
This equipment relies on the metallic (exposed conducting) parts of the equipment being effectively earthed. If this earth connection is lost there is a possibility of the exterior of the equipment becoming live, with a potentially fatal result. Anyone touching live metal will be in contact with electricity.

It is recommended that Class I equipment has a portable appliance test to ensure the earth connection is sound.

Double insulated equipment (Class II)

Class II equipment is also referred to as 'double insulated' equipment. This means that there is extra insulation within the construction of the equipment to prevent accidental contact with live parts, even if there is a fault. If you cannot see this symbol, you should assume that the electrical equipment is a Class I appliance.

Class II equipment does not need an earth connection to maintain safety function.



6. Inspection details

Fixed wiring testing

Fixed wiring should be inspected and tested every 5 years and is completed by an external contractor.

Portable equipment testing

Effective maintenance of portable electric equipment can be achieved by a combination of:

- checks by the user;
- formal visual inspections by a competent person;
- a combined inspection and test, also known as a portable appliance test (PAT), by an electrically competent person.

User Check - equipment which is handheld and portable should receive a visual inspection every time it is to be used. The use check should consist of a simple check looking for :

- damage to the supply cable, including fraying or cuts;
- damage to the plug or connector eg the casing is cracking or the pins are bent;
- the outer sheath of the cable is not effectively secured where it enters the plug or the equipment.
- damage to the external casing of the equipment;

Formal visual inspection – this formal visual inspection should be completed by a competent person and consist of:

- reviewing whether the electrical equipment is being used in accordance with the manufacturer's instructions.
- the equipment is suitable for the job;
- the user has reported any issues.
- there are no signs of internal damage, overheating or water damage to the plug;
- the correct fuse is in use (either 3A or 13A). Older type 5 & 10A should be replaced. ,
For unmoulded plugs
- the wires including the earth, where fitted, are attached to the correct terminals
- the terminal screws are tight;
- the cord grip is holding the outer part (sheath) of the cable tightly; and
- no bare wire is visible other than at the terminals.

PAT testing

PAT testing is only routinely required on earthed equipment (Class I) to confirm earth connection is sound. If there is reason to suppose the equipment may be defective and this cannot be confirmed by visual examination it is recommended to perform PAT testing.

Record of inspection should be recorded and equipment should be labelled indicating that it has been tested and details of next scheduled inspection date. An equipment failing an inspection should be immediately removed from use.

PAT testing equipment should be calibrated annually.

7. Inspection frequencies

The table below defines the agreed minimum inspection frequencies for EFHL. Inspections can be completed at increased frequencies if local situations dictate.

Equipment	Inspection frequency	
	Formal visual inspection	Combined inspection & testing (PAT)
Earthed equipment (Class I) Regularly moved (Electric kettles, floor cleaners, kitchen & laundry equipment, irons).	Not required	1 year
Earthed equipment (Class I) Rarely moved (Desktop computers, VDU screens, Photocopiers, fax machines)	Not required	3 years
Double insulated (Class II) <input type="checkbox"/> Regularly moved Hand-held (Floor cleaners, some kitchen equipment)	1 year	Not required
Double insulated (Class II) <input type="checkbox"/> Not hand held , moved occasionally (Table lamps, fans)	3 years	Not required
Double insulated (Class II) <input type="checkbox"/> Rarely moved (Desktop computers, VDU screens, Photocopiers, fax machines)	3 years	Not required

** Class II equipment is marked with a symbol. If you cannot see symbol assume Class I and carry out PAT test.

8. New equipment

New purchased equipment should be supplied in a safe condition and does not require a formal portable appliance inspection or test. However, a simple visual check is recommended to verify the item is not damaged.

Equipment brought into the home by a resident should receive an immediate user check and be made available for formal visual inspection or PAT test at the earliest opportunity.

9. Training

Staff working on or with electrical equipment must be competent for the task. This means that they must have attended and obtained qualification in Inspection & testing of electrical equipment. They will then be deemed competent to use a simple "pass / fail" type of portable appliance tester where no interpretation of readings is necessary.

10. Electrical switchgear rooms

Rooms containing electrical switchgear (including lift controls) must be locked to prevent unauthorised access. Where there is live exposed parts at the front of the panel there should be an Electrical Safety poster displayed and insulating matting used as floor covering.

11. Associated documents

- HSP 62A PAT Testing Record
- RAG 12 Fire Prevention Electrical

12. A Summary of the main points

Check that:

- The home has received a fixed electrical test within the last 5 years and any resulting actions have been completed.
- Electrical switchgear rooms are locked and access controlled.
- All users of handheld electrical equipment undertake a visual user check before use and report any defects.
- A program of portable electrical testing is in place and equipment is labelled.

New equipment brought into the home by a resident receives an immediate user check and is made available for formal visual inspection or PAT test at the earliest opportunity.

13. Document history

Author	Steve Andrews (Health & Safety Manager)
Date of Implementation	01/08/2015
Date of next full review	01/01/2027

Issue	Date	Author	Reason
1.0	01/08/2015	Steve Andrews	New format. Document replaces HSP09 Electrical Safety.
1.1	23/01/2017	Steve Andrews	Added requirements to get PAT Tester calibrated annually.
1.2	23/03/2017	Steve Andrews	Added advice to replace 5 & 10A fuses.
2.0	15/01/2018	Steve Andrews	Full review – no changes
3.0	13/01/2021	Steve Andrews	Full document review – no changes.

4.0	01/02/2024	Steve Andrews	Full document review – section 11 added (Associated documents).
4.0	23/02/2024	Steve Andrews	Banner updated, no other changes, issue number kept same.