

HEALTH & SAFETY INFORMATION SHEET 9

Electricity At Work

The Electricity at Work Regulations 1989 impose a general duty on employers to maintain their electrical installation and equipment (known collectively as the System) in a safe condition. They also give the self employed, employees and employers duties to ensure that hazardous work (e.g.. work on live conductors) is carried out in a safe manner.

Ensuring that the electrical system is safe

The only way to do this is to check the system regularly. Essentially, this involves a three stage operation:

- User checks
- Formal visual inspection
- Test and examination

1. User Checks

- Staff should check equipment before it is used and defects reported.
- Where defects are found the equipment should be taken out of use.
- Examples of some defects which should be checked for include:

- Visible colour coded wire indicating ineffective cord grips or damaged cables.
- Damaged plugs.
- Malfunctions.
- Non-standard joins in cables i.e.. taped joints and plastic connector blocks.
- Signs of overheating, scorch marks and discolouration.
- Damage to casings or loose screws.

2. Formal Visual Inspection

- This is similar to **user checks** but is carried out in a formal and systematic manner.
- It would include removal of plug covers, checks on fuses, security of cord grips and cable termination's and looking for signs of overheating & damage.
- It is important to recognise when the limits of your competence are reached.
- It is essential that proper instruction provides the necessary expertise in this area

3. Test and Examination

Sometimes it may be necessary to seek advice from outside experts who will carry out a test and examination. This involves more detailed investigation into the installation and equipment in order to confirm safety.

- **Installation:** This is the fixed wiring from your meter through to socket outlets and light termination's. There is an accepted and recognised method for establishing whether your installation is in a safe condition and suitable for its actual use.
- **Appliances:** It is not always possible to identify certain electrical faults by visual examination alone. Therefore, it is sometimes necessary to carry out:-
- **Portable Appliance Testing (PAT)** in which test equipment is used to check earthing, polarity, cable termination's and suitability for the environment. At this stage the frequency for the test and examination should be set by someone who is competent.
- **Competence:** When using an outside contractor, you must ensure that their technical knowledge or experience is appropriate for the work you are asking them to do e.g.. membership of a recognised trade body, such as the Electrical Contractors` Association (ECA) or the National Inspection Council for Electrical Installation Contracting (NICEIC) may be one indicator of competence. You must also be certain when employing someone with Electrical Joint Industries Board Qualifications that their expertise is in the relevant area e.g. a qualified television engineer may not be competent to rewire a building.
- Employees should be competent to carry out visual checks provided that they have been given the necessary instruction or training. The use of PAT equipment by employees may be acceptable providing it is subject to proper instruction and training and adherence to strict testing procedures.

4. Keeping Records

Although not a legal requirement, it is a good idea to keep written records. You will then know exactly where you are with inspections and tests and you can prove, should you need to, that you have been complying with the law. For installation tests, you should obtain a certificate of compliance or test and examination such as that laid down in the current edition of the IEE Wiring Regulations. A log book should also be maintained for the results of the PAT testing. All equipment subject to PAT should be individually identifiable.

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