

CORPORATE PROCEDURE

Portable Electrical Appliance Testing – P.A.T.

1 Aim of the procedure

- 1.1 The aim of this procedure is to outline the measures and working practices for completing portable electrical appliance testing (P.A.T.), this procedure is to be used throughout Neath Port Talbot County Borough Council (NPTCBC).
- 1.2 It is essential that these working practices are consistently applied for all electrical equipment.

2 Definition of Portable Electrical Appliances

- 2.1 Portable electrical appliances are those appliances, connected to a 13 A BSI 1363 plugs, BSEN 60309-2 industrial plugs or hard wired to the fixed installation via fused connection or single or three-phased isolators.

All portable electrical equipment is classified according to its function and type as follows:-

- Class 1
- Class II

Each piece of equipment has the class stamped on it, usually on the body of the piece of equipment or on the plug.

If there is any doubt please contact your Directorate Health and Safety Officer for advice.

3 Responsibilities

3.1 Corporate Directors

Corporate Directors shall be responsible for the overall implementation of this Corporate Procedure.

3.2 Governing Bodies of Schools Maintained by Education Authority

There is a shared overall responsibility for health, safety and welfare between the LEA, governing body and headteacher.

3.3 Heads of Service/Headteachers

Heads of Service/Headteachers shall be responsible for the day-to-day implementation of this Corporate Procedure and will ensure that the provision of the necessary resources are available to ensure compliance with this Corporate Procedure.

3.4 Managers/Team Leaders

- 3.4.1 Managers/Team Leaders shall be responsible for ensuring the implementation of this Corporate Procedure within their workplaces in order to ensure that all portable electrical appliances are tested and up to date.
- 3.4.2 Managers/Team Leaders are also responsible for ensuring that all new portable electrical appliances are tested according to the requirements of this procedure. New equipment must be entered onto the inventory log(s) in order to ensure that it is tested when due.
- 3.4.3 Managers/Team Leaders must ensure that employees do not bring their own portable electrical appliances into the work place unless permission has been granted and the equipment has first been tested according to the requirements of this Corporate Procedure.
- 3.4.4 Managers/Team Leaders must ensure that all equipment, which is being loaned or borrowed, must have a valid P.A.T. test certificate/sticker and be checked for fault before it changes hands. All equipment that has been loaned and is being returned must be checked before it is returned to normal use or storage.
- 3.4.5 All portable electrical appliances that are hired from a hire/lease company must have a valid test certificate and be labelled accordingly.
- 3.4.6 All faulty equipment must be taken out of service and isolated to prevent unauthorised use until it has been repaired/replaced and re-tested.

3.5 Employees

- 3.5.1 The employee is responsible for visually checking the equipment that they use, in order to ensure that electrical testing is up to date and to identify any faults with the equipment before it is used.
- 3.5.2 Employees are not permitted to use their own portable electrical appliances for work unless they have the permission of their Manager/Team Leader and the equipment has been P.A.T. tested in addition all portable electrical appliances must have either the BSI safety kite mark or the CE safety mark or both.

- 3.5.3 All employees must report any defects with portable electrical appliances to their Line Manager as soon as the fault is identified. The faulty piece of equipment must be taken out of use and labeled accordingly.

4. P.A.T. Tester Competency

- 4.1 No person shall engage in activities where they do not have the necessary technical knowledge or experience. All persons who carry out portable electrical appliance testing must be trained for the work that they carry out.

There are two levels of competency that P.A.T. testers may achieve:-

- The first is where a person not qualified in electrical work routinely uses a simple “Pass / Fail” type of portable appliance tester, where no interpretation of readings is necessary, this is useful for low risk environments such as the office.
- The second is where a person with electrical qualifications and skills, ie, an electrician, uses a more sophisticated instrument that provides values for earthing and insulation, which do require interpretation.

- 4.2 The P.A.T. testers skill and ability should include:-

- a) Experience of relevant electrical work
- b) Experience of portable electrical appliance testing and the test equipment to be used.
- c) Adequate training and/or supervision where a & b above cannot be proved.
- d) Experience of the interpretation of the results
- e) Practical experience of the type of equipment being tested

5. Types and Frequency of Tests

- 5.1 Although new portable electrical appliances have a high standard of in-built safety, they must nevertheless be maintained to prevent deterioration.

It is extremely important when setting maintenance frequencies that they are realistic, both in terms of being adequate to prevent equipment becoming unsafe and manageable taking into account available resources. P.A.T. testing programmes must be set, planned and implemented in all directorates.

5.2 Frequency of inspection can be determined by experience and will generally be more frequent than for testing. Guidance relating to inspection and test frequencies is given in the following guidance documents:

- (a) The Electricity at Work Regulations 1989 - Maintenance of Portable Electrical Appliances - Inspection and Testing.
- (b) The Maintenance of Portable Electrical Equipment in Offices, and other Low-Risk Sector Premises.
- (c) IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment.

5.3 There are three basic types of inspection that should be conducted:-

The user check - this is a visual inspection that every employee should conduct, and should include a check to ensure the cable is not chuffed or scuffed, the plug is not damaged (no broken pins or cracks in the casing), there are no make shift joints in the cable (taped joints), there are no loose parts on the body of the main piece of equipment and there is no evidence of overheating (scorch marks, blackened areas or discolouration).

Formal Visual Inspections – can be carried out at regular intervals, which are determined by the inspection regime that has been put into place (the inspections must be completed by an authorised P.A.T. tester, see section 4.1 above). The tester will undertake a more in-depth inspection than that of the user. The P.A.T. tester will also use the P.A.T. machine to secure a pass/fail reading.

Combined Inspection and Tests - if carried out properly will identify potentially dangerous faults and must be carried out by a qualified electrician according to the inspection regime that is in place.

5.4 The tables below have been prepared in line with guidance offered by the Health and Safety Executive, and will satisfy many situations of average use and these frequencies can be used until sufficient experience is built up to establish what is appropriate to your particular circumstances. *See table 1*

Table 1 – suggested frequencies of inspection and testing

Equipment	Class	Inspection & Tests	Offices & Shops	Hotels	Schools
Handheld	Class I and II	User checks	Before use	Before use	Before use
	Class I	Formal visual Insp.	Every 6 months	Every 6 months	Every 4 months
	Class II	Combined insp and test	Annually	Annually	Annually
Portable	Class I and II	Formal visual Insp.	Every 6 months	Every 6 months	Every 4 months
	Class I	Combined Insp and test	None	None	Every 4 years
	Class II	User checks	Weekly	Weekly	Weekly
Movable	Class I and II	Formal visual Insp.	Annually	Annually	Every 4 months
	Class I	Combined insp and test	Every 2 Yrs	Every 2 Yrs	Annually
	Class II	Formal visual Insp.	Every 2Yrs	Every 2Yrs	Every 4 months
Stationary	Class I and II	Combined Insp and test	None	None	Every 4 years
	Class I	User checks	Weekly	Weekly	Weekly
	Class II	Formal visual Insp.	Annually	Annually	Every 4 months
IT	Class I and II	Combined insp and test	Every 2 Yrs	Every 2 Yrs	Annually
	Class I	Formal visual Insp.	Every 2Yrs	Every 2Yrs	Every 4 months
	Class II	Combined Insp and test	None	None	Every 4 Years
IT	Class I and II	User checks	None	None	Weekly
	Class I	Formal visual Insp.	Every 2 Years	Every 2 Years	None
	Class II	Combined insp and test	Every 4 Years	Every 4 Years	Annually
IT	Class I and II	Formal visual Insp.	Every 2 Years	Every 2 years	Annually
	Class I	Combined Insp and test	None	None	Every 4 Years
	Class II	User checks	None	None	Weekly

6. Maintenance Log and Test Records

6.1 Suitable maintenance logs and test records must be kept as they are useful for ensuring that all appliances are part of the required maintenance and inspection regime.

6.2 The maintenance log should include:-

- the date when the tests/checks were carried out.
- a unique serial number for each piece of equipment.
- the pass/fail result of the test completed.
- any remedial action that may be required
- the item being checked (ie, plug, fuse, cable, earth test, etc)
- class of the equipment being tested (Class I or II)
- make and model of the equipment.
- fuse rating
- frequency of inspection
- Purchase date and date re-test is due
- Earth continuity and insulation resistance results.