



Directorate of Corporate Services

Portable Electrical Equipment Policy

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1. Summary

1.1. There is no statutory frequency of inspection and testing for portable electrical equipment. The frequency of testing should reflect the risk of the appliance causing damage or injury. This increases with amount of appliance use and the harshness of its working environment.

1.2. The generally accepted description of portable electrical equipment is that it has a lead and a plug and can easily be moved from place to place this would include vacuum cleaners, kettles, heaters, fans, televisions and desk lamps. This type of equipment tends to be class I or earthed equipment and therefore poses the higher risk because of the frequent use and moving.

1.3. The description also refers to equipment that could be moved such as photocopiers, fax machines and desk top computers. The majority of this equipment is double insulated or class II equipment and is usually infrequently moved. Office equipment is regarded as low risk with respect to hazards arising from portable electrical appliances.

2. Terminology

- **Class I** applies to equipment that relies on earthing of the conductive case and one layer of insulation covering its live internal parts for protection against electric shock. The cable will have three core wires.
- **Class II** applies to equipment that is double insulated meaning it relies on two layers of insulation between live internal parts and the user for protection against electric shock. This equipment is usually marked with the 'double square' symbol. The cable will have two core wires.



- **User checks** are a simple visual check for signs of damage or deterioration to cables, plugs and exterior casing.
- **Formal visual inspections** are a closer form of inspection than the user checks. They must be undertaken by a competent person. This person need not necessarily be an electrician but they must have the knowledge, experience, guidance and supervision appropriate for their role. The inspection will include looking inside the plug at cable terminations.
- **Combined inspection and testing** must be carried out by an electrically competent person. This check should establish the correct polarity of the supply cables, correct fusing, effective termination of conductors and cores, earth continuity and integrity of the insulation.

3. Records

3.1. Managers are required to ensure an inventory of all portable electrical equipment is compiled for their area of responsibility; this will need to be regularly updated as items are purchased or disposed of. A standard inventory form is reproduced on page 6.

3.2. Photocopy the master copy of the inventory for use as a working document. Details should be recorded in the two test columns together with any necessary information in the comments column alongside. Appliances should be grouped into the different test regimes, using a separate page for each frequency rating (see page 4).

4. Testing

4.1. Combined inspection and testing of appliances may be carried out in house providing the person conducting the tests has the correct testing equipment and is deemed competent to operate it and interpret the results.

Testing should only be carried out following a satisfactory formal visual inspection and the arrangements for plug/fuse replacement and failed items should be established beforehand. A pass label may be applied to the equipment stating either the date tested or date of the next inspection. Any failed equipment should be removed from service and the plug removed to prevent further use.

4.2 Managers should be made aware of the defective appliances and arrangements for repair or disposal made. Repaired items must be tested before being put back into service.

4.3 Combined Inspection and Testing is not required if the equipment is double insulated or class II.

Commercially available portable appliance testers should not be used on sensitive electronic equipment such as computers as permanent damage may be caused by the high test voltages and currents.

5. Equipment

5.1. For general office equipment e.g. IT equipment, photocopiers and fax machines user checks are not required and a formal visual inspection has a recommended frequency rate of between 2-4 years. In a typical office environment this could safely be set at the 4 year period. Any computer equipment that is moved to a different location should be given a formal visual inspection before use.

5.2 For double insulated equipment, that is not hand held and moved occasionally such as projectors, fans and desk lamps, user checks and combined inspection and testing is not generally required. A formal visual inspection is suggested at a period of 2-4 years.

5.3. For hand held double insulated equipment that is moved frequently (e.g. some vacuum floor cleaners) a user check is required before use and a formal visual inspection is suggested at 6-12 months. Combined inspection and testing is not required for this equipment. Any cleaners' equipment should be included on a list of equipment used.

5.4. For earthed or class I equipment (e.g. kettles) a visual check by the user is required and formal visual inspection is suggested for 6-12 months. Combined inspection and testing is suggested at intervals of 2 years. For items such as kettles the cost of replacing the equipment every twelve months may be less than the cost of inspection and testing.

5.5 Cables (leads) and plug tops connected to any portable electrical appliance are to be subjected to user checks (if the lead is moved frequently). This would not necessarily apply to computer leads and other similar equipment. Formal visual inspection should be carried out between 6 months to 4 years and combined inspection and testing is required between 1-5 years dependant on the type of equipment.

6. Extension cables

6.1 The use of extension leads should be avoided where possible; where use is frequent it is advisable to provide adequate socket outlets. If used, extension leads should be subjected to the same testing regime as portable appliances. Very long extension leads (above 12m for 1.2mm² cable size, above 15m for 1.5mm² cable size) should be protected by an RCD (residual current device).

6.2 Cables (leads), plug tops and mains voltage extension leads connected to any electrical equipment are recommended to have a user check before being used.

6.3 Formal visual inspection is suggested at intervals of between 6 months to 4 years. For IT and basic office equipment the 4 year period is acceptable. Equipment that is frequently moved should be subjected to a more frequent inspection period. The period for combined inspection and testing of leads or extension leads is suggested at between 1-5 years dependant on the type of equipment.

6.4 It may be more cost effective to consider a programme of replacement of leads and extension cables at 5 yearly intervals rather than have them inspected and tested.

**ISLE OF WIGHT COUNCIL
CHECKLIST FOR SUGGESTED INSPECTION AND TESTING INTERVALS FOR
PORTABLE APPLIANCES**

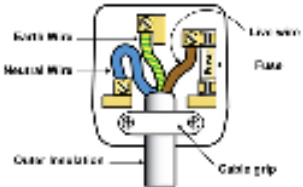
Equipment/Environment	User check	Formal visual inspection	Combined inspection and testing	Comments
Desktop PCs VDUs	No	4 years	None if double insulated otherwise 5 years.	Equipment can be damaged by the use of high voltage and current from test equipment.
Photocopiers, fax machines – not hand held, rarely moved	No	2-4 years	None if double insulated (Class II) otherwise 5 years.	
Double insulated (Class II) equipment not hand held. Moved occasionally e.g. fans, projectors, heaters.	No	2-4 years	None	
Double insulated (Class II) equipment hand held e.g. some floor cleaners.	Yes	6-12 months	None	Cleaner's equipment must be included on list of equipment.
Earthed equipment (Class I) e.g. electric kettles, some floor cleaners.	Yes	6-12 months	2 years	Cleaner's equipment must be included on list of equipment.
Cables (leads) and plugs connected to the above. Extension leads (mains voltage)	Yes	1-4 years	1-5 years	Period between inspections is dependant on type of equipment.
Battery operated (less than 20 volts)	No	No	No	
Extra low voltage: (less than 50 volts AC) e.g. telephone equipment, low voltage desk lights.	No	No	No	
Industrial	Yes	3 months	6 months	
Equipment used in arduous conditions (damp, dusty, wet)	Yes	1 month	3 months	

Appendix 2

**ISLE OF WIGHT COUNCIL
PORTABLE ELECTRICAL APPLIANCES
FORMAL VISUAL INSPECTION CHECKLIST**

Listed below are typical routine electrical checks for portable apparatus, to be carried out by a suitably competent person.

Note: This checklist is intended as a guide; certain apparatus may need different or additional inspections and tests.

Item	Test	Pass Condition
1 Mains Lead	(a) Visual inspection (b) Mains Plug Correct wiring of a plug: 	Insulation and sheath. No damage Correctly connected Cable clamp gripped to sheath Correct fuse fitted BS type or equivalent
2 <i>Either:</i> mains lead connected (if lead detachable) Or: cable clamp in equipment	(a) Visual inspection of cable inlet connector (b) Attempt to open socket without tool (c) Attempt to pull cable from cable connector (a) Inspection of grommet (b) Sharp pull on cable (c) Rotation of cable	No damage or burning Un-openable No movement Cable insulation protected No appreciable movement No rotation
3 Mains on/off switch	Visual inspection	Correct operation No damage
4 Conducting case	(a) Visual inspection: if marked treat as item 5	No damage
5 Insulating case	Visual inspection	Maker's double insulation mark visible Case undamaged
6 Accessible fuse holders (if any)	Visual inspection	No damage Removal of carrier does not permit live part to be touched

