



# JPS Calibration Services

## Method Statement

of

## The Provision Of Portable Appliance Testing



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## 1. SCOPE

This document has been prepared with a view to detailing and informing the customer in respect of the Portable Appliance Tests undertaken by JPS. JPS performs these tests under the guidance of The Code of Practice for In-service Inspection and Testing of Electrical Equipment, which is a document produced by and available from the Institution of Electrical Engineers.

The equipment within the scope of this document includes electrical appliances for household and similar use, certain IT equipment supplied by plug and socket, luminaries, and similar equipment. Generally speaking this document applies to all equipment fitted with the standard single phase 3 pin plug. The tests performed only indicate the status of the safety of the Unit Under Test and, although a functional test is performed, should not be misinterpreted as a verification of the units compliance with operational specifications.

It must also be understood that some appliances (Class1) rely upon the fixed wiring of the socket to ensure continuity of the Earth connection. These tests ensure the appliance under test has the correct Earth connection resistance but cannot ensure the continuity within the Fixed wiring of the supply and that Further Fixed wiring periodic tests are required.

## 2. DEFINITIONS

- 1 **BASIC INSULATION**  
Insulation applied to live parts to provide basic protection against electric shock and which does not necessarily include insulation used exclusively for functional purposes.
- 2 **CLASS 1 EQUIPMENT**  
Equipment in which protection against electric shock does not rely on basic insulation only, but which includes means for the connection of exposed-conductive parts to a protective conductor in the fixed wiring of the installation.
- 3 **CLASS 2 EQUIPMENT**  
Equipment in which protection against electric shock does not rely on basic insulation only, but in which additional safety precautions such as supplementary insulation are provided, there being no provision for the connection of exposed metalwork of the equipment to a protective conductor and no reliance upon precautions to be taken in the fixed wiring of the installation
- 4 **CLASS 3 EQUIPMENT**  
Equipment in which protection against electric shock relies on the supply from a separated extra low voltage source (SELV), such as an isolating transformer to BS EN 61558.

## 3. THE LAW

The Code of Practice which was prepared by the Institution of Electrical Engineers with a view to determining the inspections and tests necessary to ensure that electrical equipment is maintained properly so as to prevent danger. Although some references may be made to legislation within this document, the specific legislation should be consulted.

The legislation of specific relevance to electrical maintainance is:

The Health and Safety at Work etc Act 1974  
The Management of Health and Safety at Work Regulations 1999  
The Electricity at Work Regulations 1989  
The Workplace(Health, Safety and Welfare) Regulations 1992  
The Provision and Use of Work Equipment Regulations 1998

## 4. INSPECTION AND TESTING

- 1 **EARTH CONTINUITY TESTING**  
  
This test can only be applied to Class 1 equipment or lead sets. This test ensures that an earth connection is made between the exposed metalwork of the appliance and the earth pin of the plug top.
- 2 **INSULATION RESISTANCE TESTING**  
  
This test is performed between live conductors, i.e phase and neutral, connected together and the body of the appliance. A test voltage of 500V d.c is applied and the Insulation Resistance determined to ensure adequate protection is in place between the conductors.

### 3 VISUAL INSPECTION

This test involves an indepth check of the visual integrity of the plug, flex, fuse and case of the Appliance under test. Power is required to be OFF for a complete visual inspection to take place.

### 5. MICROWAVE POWER AND LEAKAGE

Additional Requirements for Microwave Ovens are covered by the BS EN 60335-2-25 Safety Standard. If instructed JPS can perform additional tests to ensure the appliance under test is working optimally.

#### MICROWAVE POWER

This involves heating a known volume of water for a known period and calculating the power generated by the oven as a function of the period and difference in temperature generated in the water.

#### MICROWAVE LEAKAGE

This involves the measurement of the microwave leakage to ensure that the leakage does not exceed the recommended  $50 \text{ W/m}^2$

#### DOOR INTERLOCK

This involves checking the operation of the door interlock system to ensure that microwave generation ceases when the door is opened.

### 6. PERIODICITY

JPS will as standard perform these tests on a yearly basis. A table indicating the suggested periodicities of the different appliance types and environments is attached as detailed by the Code of Practice.

### 7. LABELLING

Appliances which PASS the combined tests will be appended with a green barcoded label indicating the appliances PASS status and retest date.  
Appliances FAILING the combined tests will be appended with a RED FAIL label and the customer will be Advised of its FAIL status and removed from service.

### 8. REPORTS

Upon Completion of the testing a report shall be generated detailing the tests and results undertaken. This Report shall be forwarded to the responsible customer contact.

### 9. RISK ASSESSMENT

Specific hazards in the testing environment shall be discussed with the duty holder at the time of site survey. See Appendix 2

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## Appendix 1

### SUGGESTED INITIAL FREQUENCY OF INSPECTION AND TESTING OF EQUIPMENT.

	Type of Premises	Type of Equipment	User Checks	Class 1		Class 2	
				Formal Visual Inspection	Combined Inspection and Testing	Formal Visual Inspection	Combined Inspection and Testing
				1	2	3	4
1	Construction sites 110V equipment	Stationary IT Movable Portable Handheld	None None weekly weekly weekly	1 month 1 month 1 month 1 month 1 month	3 months 3 months 3 months 3 months 3 months	1 month 1 month 1 month 1 month 1 month	3 months 3 months 3 months 3 months 3 months
2	Industrial Including Commercial kitchens	Stationary IT Movable Portable Handheld	weekly weekly before use before use before use	None None 1 month 1 month 1 month	12 months 12 months 12 months 6 months 6 months	None None 3 month 3 month 3 month	12 months 12 months 12 months 6 months 6 months
3	Equipment Used by the public	Stationary IT Movable Portable Handheld	None None None None None	monthly monthly weekly weekly weekly	12 months 12 months 6 months 6 months 6 months	3 months 3 months 1 month 1 month 1 month	12 months 12 months 12 months 12 months 12 months
4	Schools	Stationary IT Movable Portable Handheld	weekly weekly weekly weekly before use	None None 4 months 4 months 4 months	12 months 12 months 12 months 12 months 12 months	12 months 12 months 4 months 4 months 4 months	48 months 48 months 48 months 48 months 48 months
5	Hotels	Stationary IT Movable Portable Handheld	None None weekly weekly before use	24 months 24 months 12 months 12 months 6 months	48 months 48 months 24 months 24 months 12 months	24 months 24 months 24 months 24 months 6 months	None None None None None
6	Offices and Shops	Stationary IT Movable Portable Handheld	None None weekly weekly before use	24 months 24 months 12 months 12 months 6 months	48 months 48 months 24 months 24 months 12 months	24 months 24 months 24 months 24 months 6 months	None None None None None

The information on suggested initial frequencies given above is more detailed and specific than HSE guidance, but is not considered to be inconsistent with it.

## Appendix 2

### Hazard Identification and Risk Assessment

Assessment No.		Work Description	
Site Type		Site Address:	
Site Name			
Site Contact			
Date			

Personnel at risk					
Own Personnel	O	Contractors Operatives	A	Public	P
Clients Personnel	C	Other Visitors	V	Others (Specify)	X

Hazard Identification				Risk Rating		
Hazards/ Risks	Tick if present	Persons At risk	Existing Control Measures	Likeli-hood	X severity	=Risk rating
Slips/Trips/Falling Over						
Working from Height						
Falling Objects						
Stabs Cuts Grazes						
Blows, Impact, Crushing						
Moving Parts						
High Low temperature						
Fire Scalds Heat						
Non Ionising Radiation						
Electrical Shock						
Poor Lighting						
Confined Spaces						
Toxic Hazard						
Bio Hazard						
Ionising Radiation						
Manual Handling						
Other (specify):						

If Individual Risk Rating > 4 additional control measures are required. List below:

P.P.E. Required List below:

### Risk Rating Method

Once all the hazards have been identified and the control measures currently in place have been highlighted, the risk rating can be completed. Trivial risks should be included but can usually be ignored.

### Risk Rating

Two things contribute to the risk arising from a hazard.

1. How likely it is that the hazard will cause an accident (**Likelihood**)

0	Almost Impossible	There is no risk present, only under freak conditions could something happen.
1	Unlikely	If other factors were present an accident/illness/incident might occur but the probability is low
2	Possible	An accident/illness/incident may happen if additional factors precipitate, but unlikely to occur
3	Probable	An accident/illness/incident will happen if additional factors precipitate
4	Very Likely	An accident/illness/incident will happen if additional factors are not eliminated
5	Certain	If work continues as it is there is almost a 100% chance that an accident will happen

2. If it did cause an accident how severe the consequence would be (**Severity**)

0	Nil	No injury/no disease/no lost time/no delay
1	Minor	Minor injury/ First Aid/lost time/delay
2	Low	Over 3 day injury
3	Medium	Reportable injury/ disease/ occurrence . Temporary disability
4	High	Permanent total/partial disability
5	Major	Multiple/single death

In order to determine a current risk rating, multiply its likelihood factor by its severity factor

Likelihood →		1	2	3	4	5
		Unlikely	Possible	Probable	Likely	Certain
1	Minor	1	2	3	4	5
2	Low	2	4	6	8	10
3	Medium	3	6	9	12	15
4	High	4	8	12	16	20
5	Major	5	10	15	20	25
Severity ↑						

The risk rating for **individual hazards** can then be classified as follows:

The higher the score, the higher the risk and the higher the hazard priority for control measures

#### Individual Risk Rating

1 – 4 LOW

This is the usual rating you would expect and in the majority of cases is the normal condition using the correct control measures, but an accident or incident could still happen.

5 – 10 MED

This is the ideal and every effort must be made to reduce and maintain the risk rating within this band.

Record the findings of your assessment and introduce additional control measure to improve the Risk rating. Certain activities will be out of your control so every effort should be exercised when carrying out such activities with medium risk

11- 25 HIGH

Stop immediately/do not start activity and seek further advice.

NOTE:- If any individual hazard has a rating of 8 or higher and / or the total hazard rating is 25 or above a more in depth assessment is required.