KOUGAR TOOL HIRE

13. Once testing is complete the appliance needs to be labelled stating its unique ID, condition i.e. Passed or Failed, the next test date or date tested along with the retest period (8.4 IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment).

14. If an appliance fails the test then it should immediately be labelled and removed from service until such time it has been repaired and passed the tests relevant to the repairs carried out. These tests should be at least those listed above for the in service tests but may contain others such as flash testing as mentioned earlier.

15. Records should be kept of the tests carried out and the results obtained(8.3 and Appendix V1 of the IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment contain guidance and sample forms)

16. Any guidance from the manufacturer will take precedence over advice contained within this document.

**Publications referenced and further reading**

IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment 3rd Edition ISBN 978 0 86341 833 4

Memorandum of guidance on the Electricity at Work Regulations 1989

ISBN 0 7176 1602 9

BS EN 50191:2001 Erection and operation of electrical test equipment

BS EN 61010:1993 Safety requirements for electrical equipment for measurement, control and laboratory use.

HSE HSG 107 Maintaining portable and transportable electrical equipment published 2004 ISBN 978 0 7176 2805 6

INDG354 Safety in electrical testing at work ISBN 0 7176 22 96 7

Electrical test equipment for use by electricians GS 38 ISBN 0 7176 0845 X

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# Portable Appliance Testing

**This guidance applies to situations where an electrical appliance on hire is inspected and tested by the hire company at the users premises including at point of use on a work site.**

The person carrying out servicing/inspection/test/maintenance must have previously received suitable training in how to carry out the tasks and be aware of the range of hazards that may be found at the hirers premises and things to avoid - eg mobile plant working in the area, fall from height issues, wet or hot or humid environment, unprotected live electrical supply or equipment, high electromagnetic field strength, etc.

On site risk assessment - The test location and conditions found should be assessed by the tester and considered in relation to the work that needs to be done. If the location is unsafe or unsuitable the work should be relocated or rescheduled in consultation with the location manager.

1. It is important to read this entire leaflet before you carry out any testing of portable appliances.

2. Plan your work and think ahead to make sure you will always be working safely.

3. Only carry out testing if you are competent to do so (A person who possesses sufficient technical knowledge, relevant practical skills and experience of the work undertaken and is able to at all times prevent danger or injury to themself or others).

4. Before use ensure that the test equipment and leads along with any other safety related equipment such as rubber mats, gloves etc are in good condition and where appropriate within calibration and evidence of ongoing accuracy is available.

   Work should not be carried out on exposed conductors or components that are live at voltages that could cause harm unless: 1) there is no other way of doing the test, 2) a

minimal live area has been exposed, 3) live parts have been shrouded to the greatest extent practicable (by permanent or temporary shrouds), 4) in many cases where testing is a routine task access to live parts should be limited to shrouded access for test probes. A higher level of training, skill, experience and test equipment is needed where work is carried out on exposed live parts.

5. Always follow the instructions issued from the makers of the Portable Appliance Tester.
6. When moving equipment into the test area or the test equipment itself, ensure that you DO NOT lift beyond your own capabilities, if you are unsure consult your Manager.
7. The frequency that the appliances require testing should be ascertained, the IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment has guidance on initial frequencies in Table 7.1 and HSE in table 1 of HSG 107. Specifically for the hire industry the HSE give guidance on initial inspection intervals which are a Combined Inspection and Test before issue and Formal Visual Inspection before issue and after return (table 1 HSG 107). Once the appliance has been in service it should be monitored for degradation and damage at each and every inspection interval to allow the time period for the next inspection to be determined taking account of any trends that can be seen.
8. The tests that are required to be undertaken can be found in the IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment and depend on the Class of equipment that is being tested.
   - Class 1
   - Full Visual Inspection
   - Earth Continuity test
   - Insulation resistance test or Protective conductor/ touch current measurement or substitute/alternative leakage current test.
   - Function check
   - Class 2
   - Full Visual Inspection
   - Insulation resistance test or Protective conductor/ touch current measurement or substitute/alternative leakage current test.
   - Function check
   - Leads
   - Require a polarity test as well as the tests listed above.
   - RCD's
   - In addition to the tests above require a functional trip test but it is also recommended that they are tested for the speed at which they operate (15.10.2 and table 15.5).

   Full details of how to carry out each test is contained within the IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment. Details of how to carryout the tests could also be found within the operating manual of the test equipment.

   Care should be taken when choosing the appropriate tests because carrying out inappropriate tests may cause damage to the equipment.

   The current and voltage settings along with pass/fail limits appropriate to each test for the type of equipment can be found with the IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment.
9. Should it be apparent from a risk assessment or analysis of appliance failure data that further tests are required in addition to those stipulated in the IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment are required then they should be carried out.
10. Flash Testing also known as Hi Pot testing or Dielectric Strength Testing under the IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment is not normally required for in service tests (15.3, 10.5)
11. Other classes of equipment construction are available but the use is highly restricted or uncommon so not covered by this guidance.
12. Should an appliance be repaired then this will also require testing before it is used, the IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment again advises us that the appliance should be tested in accordance with the in service tests as stated above or tested in line with the production tests as described in 6.3of the document and Appendix V gives typical tests and pass limits. The choice of which would fall to the engineer carrying out the tests, they would need to take into account the type of repair undertaken and the risks from it, but guidance can be sought from the manufacturer if required.

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