



## How do we test hire electrical equipment?

It is important that the correct tests are performed in keeping with the particular type of equipment being tested; as such the Code of Practice suggests the following tests as those to be performed on every piece of equipment prior to being re-hired in order to fulfil the duty of care;

**Visual inspection** - A thorough inspection is required to check for any signs of damage to the mains plug, mains cable, equipment cable clamp and the outer casing.

**Earth Bond Test** - This test verifies the integrity of the protective conductor to the conductive case. Measurement is carried out at up to 25 amps and no more than 12volts. This test is only performed on Class 1 Equipment

**Flash Test** - This test is designed to ensure that gaps or clearances between conductive parts and earth are sufficient and that any degradation in insulation has not occurred and is the suggested method for measuring the strength of the insulation. The test voltages for equipment are normally between 1000 and 2500 Volts AC, with a pass limit generally less than 5mA current flow in the Circuit.

**Run (Function or Load)** - Test compares the current consumption of the equipment with expected levels by reading the current drawn in amps at mains rated voltage. In all cases comparison of test results with the rating plate of the equipment under test will determine whether or not the equipment is safe for hire.

In addition to the core tests, supplementary tests can also be performed in cases where the above may not be appropriate or additional testing is required these tests include;

**Insulation Resistance Test** – Insulation resistance is measured by applying a test voltage of 500V DC and measuring the resistance

**Powered Leakage Test** - This test is carried out on class one and class two appliances, the powered leakage test ensures that the high voltage flowing through the appliance can withstand the high voltage, this ensure that the individual using the appliance is safe under high voltages.

**RCD Trip Time Test** –The RCD must have a rated residual operating current (the current at which the RCD is designed to operate) not exceeding 30mA. The operation of an RCD should be checked using an RCD test instrument to determine that the trip time is within its limits.

It is advisable that company responsible for hiring the equipment should affix a label to inform their customers that tests for electrical safety have been carried out; they have passed and are safe for use. All test results are advised to be recorded, along with a register of any repairs performed during the life cycle of the item.

Seaward have a range of test equipment specifically designed for testing of equipment after hire.

If you require more help, please contact us at <https://www.seaward.com/gb/enquiry/>.