



Industrial Floor Cleaning Machines: Recommendations for In-Service Safety Testing

ICMMA PUBLICATION 001

Issue 2: June 2006

First Issue: June 2004

© ICMMA 2006

<http://www.icmma.org.uk/pub/001.2.pdf>

Issue table

<i>Issue Number</i>	<i>Date of Issue</i>	<i>Reason for Change</i>
001	June 2004	New document
002	June 2006	Reformatted, IEF information change.

Table of Contents

1 Risk Assessment.....4
2 Testing Program.....4
3 Notes.....5

1 Risk Assessment

It is necessary that the employer carries out a risk assessment for this activity, taking account of but not limited to:

- The working environment
- The work pattern
- The competence of the inspector

This risk assessment should be regularly reviewed and updated on an 'as needed' basis.

2 Testing Program

When testing appliances in service in accordance with the Electricity at Work Regulations 1989, it is essential to use only tests which are non-destructive and to ensure that the correct pass or fail values are used.

It is recommended by ICMMA, that the following actions, tests and limits are incorporated in an In-Service Safety Testing program:

2.1 Preliminary Inspection

Make sure that there is no physical damage to the equipment, which may compromise machine safety; check for signs of overheating and that the mains lead and plug top is in good condition.

2.2 Earth Continuity Test (Class I, earthed appliances and cords only)

Pass if result is below 0.5 ohms in the earth conductor with the mains cable fitted using a test current of 20 to 25 amps maximum.

2.3 Insulation Resistance

To be measured at 500 to 1000 volts DC, minimum value, pass if the result, with the appliance SWITCHED ON, is above:

Class I, earthed, Heating equipment 3kW	0.3 megohm
All other Class I equipment	1.0 megohm
Class II, double insulated equipment	2.0 megohm

2.4 Mains Leads

2.4.1 Fixed Mains Leads

Check the security of fixed mains leads by applying a no-jerk pull of 100 Newtons (10kg). The cord should not move.

2.4.2 Detachable Mains Leads (Cord Sets)

It is recommended that detachable mains leads (cord sets) cord sets are identified, labelled and tested separately from the appliance as follows:

- Class I (earthed) appliance:
- Visual inspection.
 - Earth continuity, polarity and insulation tests.

Class II(double insulated) appliance:
Visual inspection.
Polarity and insulation tests.

2.4.3 Functional Test

To ensure that the appliance runs safely and satisfactorily.

2.4.4 Electrical Strength Test (Flash Test)

It is recommended that this test should be avoided as an in-service test

3 Notes

1. **Faulty equipment** must not be used; it must be reported, labelled and if unsafe withdrawn from service immediately.
2. **Further procedures** may be appropriate for testing following major repair or refurbishment, or when testing appliances prior to hire. **If in doubt**, ask the manufacturer of the appliance for advice.
3. **For detailed information** on in-service testing refer to the IEE Code of Practice for In-Service Inspection and Testing of Electrical Equipment.
ISBN 085296 776 4
Available from:
Institution of Engineering and Technology,
Michael Faraday House,
Six Hills Way,
Stevenage,
Herts.
SG1 2AY
Tel: +44 (0)1438 767328
Fax: +44 (0)1438 767396
Email: sales@theiet.org
<http://www.theiet.org/publications/>

While reasonable care has been taken in the preparation of these guidelines, ICMMA accepts no liability for the user's interpretation of the information provided.

Following these guidelines should not of itself be taken to guarantee compliance with relevant standards or legislation.