INTERNATIONAL STANDARD

IEC 60335-2-92

First edition 2000-05

Safety of household and similar appliances -

Part 2-92:

Particular requirements for pedestrian-controlled mains-operated lawn scarifiers and aerators

Sécurité des appareils électrodomestiques et analogues -

Partie 2-92:

Règles particulières applicables aux scarificateurs de gazon et aux aérateurs fonctionnant sur le réseau et pour conducteur à pied

© IEC 2000 — Copyright - all rights reserved

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission 3, rue de Varembé Geneva, Switzerland Telefax: +41 22 919 0300 e-mail: inmail@iec.ch IEC web site http://www.iec.ch



Commission Electrotechnique Internationale International Electrotechnical Commission Международная Электротехническая Комиссия

CONTENTS

		Page	
FO	REWORD	4	
Cla	use		
1	Scope	6	
2	Definitions	6	
3	General requirement	9	
4	General conditions for the tests	9	
5	Void	9	
6	Classification	9	
7	Marking and instructions	9	
8	Protection against access to live parts	12	
9	Starting a motor-operated appliance		
10	Power input and current	12	
11	Heating		
12	Void	13	
13	Leakage current and electric strength at operating temperature	13	
14	Void		
15	Moisture resistance.	13	
16	Leakage current and electric strength	13	
17	Overload protection of transformers and associated circuits		
18	Endurance		
19	Abnormal operation	14	
20	Stability and mechanical hazards	14	
21	Mechanical strength		
22	Construction	20	
23	Internal wiring.	22	
	Components	22	
	Supply connection and external flexible cords		
26	Terminals for external conductors		
27	Provision for earthing		
28	Screws and connections		
29	Creepage distances, clearances and distances through insulation		
30	Resistance to heat, fire and tracking		
31	Resistance to rusting		
	Radiation, toxicity and similar hazards		
J_		∠⊣	
Anı	nex A (normative) Normative references	33	
Anr	Annex AA (normative) Test enclosure construction		
Anr	nex BB (normative) Base for thrown object test enclosure	39	
	nex CC (normative) Target panel elevation zones and recommended test report	40	
101	thrown object test	42	

Figure 101 – Safety distances – Rotary appliances	25
Figure 102 – Safety distances – Other lawn scarifiers and aerators	26
Figure 103 – Foot probe	27
Figure 104 – Foot probe test	28
Figure 105 – Strength of cutting means	29
Figure 106 – Operator zone	30
Figure 107 – Use of test rod to check guarding of cylinders	31
Figure 108 – Side coverage of cylinders	31
Figure 109 – Guarding of rear discharge cylinders	31
Figure 110 – Guarding of front discharge cylinders	31
Figure 111 – Impact test fixture for handle insulation	32
Figure AA.1 – Thrown object test fixture	35
Figure AA.2 – Single spindle rotary appliances – Test enclosure	36
Figure AA.3 – Test enclosure walls and base	37
Figure AA.4 – Test fixture for corrugated fibreboard penetration test	38
Figure BB.1 – Thrown object test fixture base detail.	40
Figure BB.2 – Nail plan of test fixture base	41
Table CC.1 – Recommended test data sheet	43

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES -

Part 2-92: Particular requirements for pedestrian-controlled mains-operated lawn scarifiers and aerators

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and not-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of ecommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The EC shall not be held responsible for identifying any or all such patent rights.

This part of International Standard IEC 60335 has been prepared by IEC subcommittee 61F: Safety of hand-held motor-operated electric tools, of IEC technical committee 61: Safety of household and similar electrical appliances.

It forms the first edition of IEC 60335-2-92.

The text of this standard is based on the following documents:

FDIS	Report on voting
61F/320/FDIS	61F/344/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This part 2-92 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the third edition (1991) of that standard.

This part 2-92 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert it into the IEC standard: Safety requirements for pedestrian-controlled mains-operated lawn scarifiers and aerators.

Where a particular subclause of part 1 is not mentioned in this part 2-92, that subclause applies as far as is reasonable. Where this standard states "addition", "modification" or "replacement", the relevant text in part 1 is to be adopted accordingly.

NOTE 1 The following print type are used:

- requirements: in roman type;
- test specifications: in italic type;
- notes: in small roman type;

Words in **bold** in the text are defined in clause 2. When a definition of part 1 concerns an adjective, the adjective and the associated noun are also in **bold**.

NOTE 2 Subclauses which are additional to those in part 1 are numbered starting from 101.

A bilingual version of this publication may be issued at a later date.



SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES -

Part 2-92: Particular requirements for pedestrian-controlled mains-operated lawn scarifiers and aerators

1 Scope

This clause of part 1 is replaced by:

This International Standard deals with the safety of **pedestrian-controlled** mains-operated electrical lawn scarifiers and aerators with rotating cutters for regenerating lawns by, for instance, combing out grass thatch and moss, or by cutting vertically into the lawn face. These scarifiers are designed primarily for use at and around the home or for similar purposes, their rated voltage being not more than 250 V single phase.

This International Standard does not apply to lawnmowers (IEC 60335-2-77), lawn trimmers (IEC 60335-2-91), lawn edge trimmers (IEC 60335-2-91), lawn edgers, flail mowers, sickle-bar mowers or agricultural mowers.

This standard does not, in general, take into account:

- the use of appliances by young children or infirm persons without supervision;
- playing with the appliance by young children.

NOTE Attention is drawn to the fact that

- for appliances intended to be used in tropical countries special requirements may be necessary;
- in many countries additional requirements are specified by the national authorities responsible for the protection of labour.