

DIN EN 14910:2007-08 (E)

Garden equipment - Walk-behind combustion engine powered trimmers - Safety

Contents		Page
Foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	7
4	List of significant hazards	8
5	Safety requirements and/or measures and means of verification	9
5.1	General	9
5.2	Guards	9
5.2.1	General	9
5.2.2	Power driven components (other than the cutting means)	9
5.2.3	Guarding of cutting means	10
5.2.4	Hot surfaces	11
5.3	Protection from exhaust fumes	12
5.4	Liquid spillage	12
5.5	Tank openings	12
5.6	Controls	13
5.7	Electrical requirements for battery circuits and high tension ignition circuits	13
5.7.1	Electrical cables	13
5.7.2	Battery installation	13
5.7.3	Overload protection	13
5.7.4	Terminals and un-insulated electrical parts	13
5.7.5	High voltage parts	14
5.8	Engine stopping and starting	14
5.9	Handle construction	14
5.10	Vibration	14
5.10.1	Reduction by design and protective measures	14
5.10.2	Reduction by information	15
5.10.3	Vibration measurement	15
5.11	Noise	15
5.11.1	Reduction as a safety requirement	15
5.11.2	Noise emission measurement	16
5.12	Cutting means	16
5.12.1	General	16
5.12.2	Cutting elements	16
5.13	Mechanical strength and rigidity	16
5.13.1	General	16
5.13.2	Cutting means guard (mechanical strength and rigidity)	17
5.13.3	Mechanical strength of cutting head	17
6	Information for use	18
6.1	Instructions for use	18
6.2	Marking	19
6.2.1	Minimum marking	19
6.2.2	Warnings	19
6.2.3	Cutting head	20

6.2.4	Marking durability	20
6.2.5	Test	20
Annex A (normative) Vibration (see 5.10)		28
A.1	Quantities to be measured	28
A.2	Instrumentation	28
A.2.1	General	28
A.2.2	Fastening of transducer	28
A.2.3	Calibration	28
A.3	Measurement direction and measurement location	28
A.3.1	Measurement direction	28
A.3.2	Measurement location	28
A.4	Test procedure	29
A.4.1	Determination of working procedure	29
A.4.2	Test method	29
A.5	Measurement procedure	29
A.6	Determination of the measurement result	29
Annex B (normative) Noise test code -- Engineering method (grade 2) (see 5.11)		32
B.1	General	32
B.2	Scope	32
B.3	Sound power level determination	32
B.4	A-weighted emission sound pressure level determination	34
B.5	Requirements for test floor	34
B.5.1	Artificial surface	34
B.5.2	Natural grass	35
B.6	Installation, mounting and operating conditions	35
B.7	Information to be recorded and reported	36
B.8	Measurement uncertainties and declaration of noise emission values	36
Annex C (informative) Example of a material and construction fulfilling the requirements for an artificial surface as required by B.5.1		37
C.1	Material	37
C.2	Construction	37
Annex D (normative) Calculation of kinetic energy (see 5.12.1)		39
Annex E (normative) Safety signs for use on trimmers (see 6.2.2)		40
Annex F (informative) Safety instructions		43
F.1	Introduction	43
F.2	General provisions	43
F.3	Safe operating practices	43
F.3.1	Training	43
F.3.2	Preparation	43
F.3.3	Operation	44
F.3.4	Maintenance and storage	45
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC, amended by Directive 98/79/EC		46
Bibliography		47