ISO 11681-2:2022-03 (E)

Machinery for forestry - Portable chain-saw safety requirements and testing - Part 2: Chain-saws for tree service

Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **2**

3 Terms and definitions **3**

4 Safety requirements and/or protective measures **4**

4.1 General 4
4.2 Handles 4
4.2.1 Requirements 4
4.2.2 Verification 4
4.3 Hand protection 4
4.3.1 Protection at front handle 4
4.3.2 Protection at rear handle 5
4.4 Balance and holding moment 5
4.4.1 Requirements 5
4.4.2 Verification 6
4.5 Protection against injury by kickback 6
4.5.1 Chain brake 6
4.5.2 Non-manual chain brake 6
4.5.3 Kickback and chain stop angles 6
4.6 Chain catcher 6
4.6.1 Requirements 6
4.6.2 Verification 7
4.7 Spiked bumper 7
4.7.1 Requirements 7
4.7.2 Verification 7
4.8 Chip discharge 7
4.8.1 Requirements 7
4.8.2 Verification 7
4.9 Guide bar cover 7
4.9.1 Requirements 7
4.9.2 Verification 7
4.10 Engine starting device 7
4.10.1 Requirements 7
4.10.2 Verification 7
4.11 Engine stopping device 8
4.11.1 Requirements 8
4.11.2 Verification 8
4.12 Throttle control system 8
4.12.1 Dimensions 8
4.12.2 Operation 8
4.12.3 Throttle control latch 9
4.13 Drive sprocket guard 10
4.13.1 Requirements 10
4.13.2 Verification 10
4.14 Clutch 10
4.14.1 Requirements 10
4.14.2 Verification 10

4.15 Protection against contact with parts under high voltage ... 10
4.15.1 Requirements ... 10
4.15.2 Verification ... 10
4.16 Protection against contact with hot parts ... 10
4.16.1 Requirements ... 10
4.16.2 Verification ... 11
4.17 Fuel and oil systems ... 12
4.17.1 Requirements ... 12
4.17.2 Verification ... 12
4.18 Exhaust gases ... 13
4.18.1 Requirements ... 13
4.18.2 Verification ... 13
4.19 Chain lubrication ... 13
4.19.1 Requirements ... 13
4.19.2 Verification ... 14
4.20 Chain tensioning ... 14
4.20.1 Requirements ... 14
4.20.2 Verification ... 14
4.21 Attachment device ... 14
4.21.1 Requirements ... 14
4.21.2 Verification ... 14
4.22 Vibration ... 14
4.22.1 Reduction by design at source and by protective measures ... 14
4.22.2 Vibration measurement ... 14
4.23 Noise ... 15
4.23.1 Reduction by design at source and by protective measures ... 15
4.23.2 Noise measurement ... 15
4.24 Electromagnetic immunity ... 15
4.24.1 Requirements ... 15
4.24.2 Verification ... 15

5 Information for use ... 15
5.1 Instructions ... 15
5.1.1 General ... 15
5.1.2 Technical data ... 15
5.1.3 Other information ... 16
5.2 Marking ... 18
5.3 Warnings ... 19
5.4 Test of labels ... 20
5.4.1 Preparation of test specimens and control specimens ... 20
5.4.2 Wipe resistance test ... 21
5.4.3 Adhesion test ... 21
5.5 Warning to be provided at point of sale ... 21

Annex A (informative) **Working with tree service chain-saws from rope and harness ... 23**

Annex B (informative) **List of significant hazards ... 28**

Bibliography ... 30