

Chain saws



Legal Notice for Standards

Canadian Standards Association (CSA) standards are developed through a consensus standards development process approved by the Standards Council of Canada. This process brings together volunteers representing varied viewpoints and interests to achieve consensus and develop a standard. Although CSA administers the process and establishes rules to promote fairness in achieving consensus, it does not independently test, evaluate, or verify the content of standards.

Disclaimer and exclusion of liability

This document is provided without any representations, warranties, or conditions of any kind, express or implied, including, without limitation, implied warranties or conditions concerning this document's fitness for a particular purpose or use, its merchantability, or its non-infringement of any third party's intellectual property rights. CSA does not warrant the accuracy, completeness, or currency of any of the information published in this document. CSA makes no representations or warranties regarding this document's compliance with any applicable statute, rule, or regulation.

IN NO EVENT SHALL CSA, ITS VOLUNTEERS, MEMBERS, SUBSIDIARIES, OR AFFILIATED COMPANIES, OR THEIR EMPLOYEES, DIRECTORS, OR OFFICERS, BE LIABLE FOR ANY DIRECT, INDIRECT, OR INCIDENTAL DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES, HOWSOEVER CAUSED, INCLUDING BUT NOT LIMITED TO SPECIAL OR CONSEQUENTIAL DAMAGES, LOST REVENUE, BUSINESS INTERRUPTION, LOST OR DAMAGED DATA, OR ANY OTHER COMMERCIAL OR ECONOMIC LOSS, WHETHER BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR ANY OTHER THEORY OF LIABILITY, ARISING OUT OF OR RESULTING FROM ACCESS TO OR POSSESSION OR USE OF THIS DOCUMENT, EVEN IF CSA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES.

In publishing and making this document available, CSA is not undertaking to render professional or other services for or on behalf of any person or entity or to perform any duty owed by any person or entity to another person or entity. The information in this document is directed to those who have the appropriate degree of experience to use and apply its contents, and CSA accepts no responsibility whatsoever arising in any way from any and all use of or reliance on the information contained in this document.

CSA is a private not-for-profit company that publishes voluntary standards and related documents. CSA has no power, nor does it undertake, to enforce compliance with the contents of the standards or other documents it publishes.

Intellectual property rights and ownership

As between CSA and the users of this document (whether it be in printed or electronic form), CSA is the owner, or the authorized licensee, of all works contained herein that are protected by copyright, all trade-marks (except as otherwise noted to the contrary), and all inventions and trade secrets that may be contained in this document, whether or not such inventions and trade secrets are protected by patents and applications for patents. Without limitation, the unauthorized use, modification, copying, or disclosure of this document may violate laws that protect CSA's and/or others' intellectual property and may give rise to a right in CSA and/or others to seek legal redress for such use, modification, copying, or disclosure. To the extent permitted by licence or by law, CSA reserves all intellectual property rights in this document.

Patent rights

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. CSA shall not be held responsible for identifying any or all such patent rights. Users of this standard are expressly advised that determination of the validity of any such patent rights is entirely their own responsibility.

Authorized use of this document

This document is being provided by CSA for informational and non-commercial use only. The user of this document is authorized to do only the following:

If this document is in electronic form:

- load this document onto a computer for the sole purpose of reviewing it;
- search and browse this document; and
- print this document if it is in PDF format.

Limited copies of this document in print or paper form may be distributed only to persons who are authorized by CSA to have such copies, and only if this Legal Notice appears on each such copy.

In addition, users may not and may not permit others to

- alter this document in any way or remove this Legal Notice from the attached standard;
- sell this document without authorization from CSA; or
- make an electronic copy of this document.

If you do not agree with any of the terms and conditions contained in this Legal Notice, you may not load or use this document or make any copies of the contents hereof, and if you do make such copies, you are required to destroy them immediately. Use of this document constitutes your acceptance of the terms and conditions of this Legal Notice.



CANADIAN STANDARDS
ASSOCIATION

CSA Standards Update Service

Z62.1-11

October 2011

Title: *Chain saws*

Pagination: **33 pages** (viii preliminary and 25 text), each dated **October 2011**

To register for e-mail notification about any updates to this publication

- go to **www.ShopCSA.ca**
- click on **E-mail Services** under **MY ACCOUNT**
- click on **CSA Standards Update Service**

The **List ID** that you will need to register for updates to this publication is **2421396**.

If you require assistance, please e-mail techsupport@csa.ca or call 416-747-2233.

Visit CSA's policy on privacy at www.csagroup.org/legal to find out how we protect your personal information.

Currently in preview, click buy full version

CSA Standard

Z62.1-11
Chain saws



**CANADIAN STANDARDS
ASSOCIATION**

®Registered trade-mark of Canadian Standards Association

*Published in October 2011 by Canadian Standards Association
A not-for-profit private sector organization
5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6
1-800-463-6727 • 416-747-4044*

Visit our Online Store at www.ShopCSA.ca



The Canadian Standards Association (CSA) prints its publications on Rolland Enviro100, which contains 100% recycled post-consumer fibre, is EcoLogo and Processed Chlorine Free certified, and was manufactured using biogas energy.

To purchase CSA Standards and related publications, visit CSA's Online Store at www.ShopCSA.ca or call toll free 1-800-463-6727 or 416-747-4044.

ISBN 978-1-55491-713-6

© Canadian Standards Association — 2011

All rights reserved. No part of this publication may be reproduced in any form whatsoever without the prior permission of the publisher.

Contents

Technical Committee on Chain Saws vi

Preface viii

1 Scope 1

2 Reference publications 1

3 Definitions 2

4 Classification 4

4.1 General 4

4.2 Types 4

4.3 Classes 5

4.3.1 Type 1 5

4.3.2 Type 2 5

5 General requirements 5

5.1 General 5

5.1.1 Type 1 5

5.1.2 Type 2 5

5.2 Throttle control system (for Type 1 saws only) 6

5.2.1 General 6

5.2.2 Throttle control trigger 6

5.2.3 Throttle control lockout 6

5.2.4 Throttle control latch 6

5.2.5 Throttle control linkage 6

5.3 Handles 6

5.3.1 General 6

5.3.2 Handle clearances and handle dimensions 7

5.3.3 Handle strength 7

5.3.4 Handle vibration isolation system 7

5.4 Chain saw starting (for Type 1 saws only) 7

5.4.1 Pull-type starter 7

5.4.2 Compression release valve 7

5.5 Controls 7

5.5.1 On/off control (for Type 1 saws only) 7

5.5.2 Oiler control 7

5.5.3 Choke control (for Type 1 saws only) 8

5.5.4 Primer/purge control (for Type 1 saws only) 8

5.6 Fuel tanks, oil tanks, and fuel feed lines 8

5.6.1 Fuel tank integrity 8

5.6.2 Fuel tank ventilation 8

5.6.3 Fuel feed line 8

5.6.4 Fuel/oil tank filler location and identification 8

5.6.5 Fuel/oil tank filler openings 8

5.7 Chain saw exhaust systems (for Type 1 saws only) 9

5.7.1 Exhaust direction 9

5.7.2 Muffler location 9

5.7.3 Spark-arresting muffler design and construction 9

5.8 Saw chain tensioning 9

- 5.9 Guide bar holes 9
- 5.10 Guards 9
 - 5.10.1 Rotating part guards 9
 - 5.10.2 Drive sprocket and clutch guards 9
 - 5.10.3 Hand guards 9
- 5.11 Chip discharge 10
- 5.12 Carburetor adjustments (for Type 1 saws only) 10
- 5.13 Brake effectiveness 10
- 5.14 Chain saw clutch (for Type 1 saws only) 10
- 5.15 Spiked bumper 10
- 5.16 Tools 10
- 5.17 Chain catcher 10
- 5.18 Safety rope attachment device (for Class 1B and 2B saws only) 10

6 Test requirements 11

- 6.1 Throttle control linkage (for Type 1 saws only) 11
- 6.2 Handle strength 11
- 6.3 Balance 11
 - 6.3.1 Portability balance 11
 - 6.3.2 Sideways balance (for Class 1B and 2B saws only) 11
- 6.4 Vibration (for Class 1A, 1B, 2A, and 2B saws only) 11
- 6.5 Excessive fuel heating (for Type 1 saws only) 11
- 6.6 Fuel tank integrity (for Type 1 saws only) 11
 - 6.6.1 Drop test verification 11
 - 6.6.2 Resistance to fuel soaking and UV exposure 11
- 6.7 Fuel feed line integrity (for Type 1 saws only) 12
 - 6.7.1 Fuel line strength and accessibility 12
 - 6.7.2 Resistance to UV exposure 12
 - 6.7.3 Resistance to ozone exposure 12
 - 6.7.4 Resistance to fuel soaking 12
- 6.8 Chain saw exhaust systems (for Type 1 saws only) 12
- 6.9 Chain saw sound pressure levels 12
- 6.10 Chain brake 12
 - 6.10.1 Chain brake stopping time 12
 - 6.10.2 Chain brake release force (activated manually) 12
 - 6.10.3 Non-manually activated chain brake performance (for Type 1 saws only) 13
- 6.11 Hand guards 13
- 6.12 Chain catcher 13
- 6.13 Holding moment (for Class 1B and 2B saws only) 13

7 Test procedures 13

- 7.1 Samples 13
- 7.2 Throttle control linkage (for Type 1 saws only) 13
- 7.3 Handle strength 13
- 7.4 Balance 13
 - 7.4.1 Portability balance 13
 - 7.4.2 Sideways balance (for Class 1B and 2B saws only) 13
- 7.5 Vibration 14
- 7.6 Excessive fuel heating (for Type 1 saws only) 14
 - 7.6.1 Test conditions 14
 - 7.6.2 Procedure 14
- 7.7 Fuel tank integrity (for Type 1 saws only) 15
 - 7.7.1 Drop test procedure 15
 - 7.7.2 Resistance to fuel soaking and UV exposure 15

- 7.8 Fuel feed line integrity (for Type 1 saws only) 15
 - 7.8.1 Test procedure for fuel line strength and accessibility 15
 - 7.8.2 Test procedure for fuel line resistance to UV exposure 15
 - 7.8.3 Test procedure for resistance to ozone exposure 15
 - 7.8.4 Test procedure for resistance to fuel soaking 16
- 7.9 Chain saw sound pressure levels 16
- 7.10 Chain brake 16
 - 7.10.1 Chain brake stopping time 16
 - 7.10.2 Chain brake release force 16
 - 7.10.3 Chain brake performance — Inertial activation (non-manually activated chain brake performance) 16
- 7.11 Hand guard strength and durability 16
- 7.12 Chain catcher 16
- 7.13 Holding moment (for Class 1B and 2B saws only) 16

8 General marking requirements 17

- 8.1 Details of chain saw basic markings 17
- 8.2 Methods of providing the basic markings 17

9 Operator's manual 17

- 9.1 General 17
- 9.2 Size of text 18
- 9.3 Language 18
- 9.4 Model number 18

Annexes

- A** (informative) — General safety precautions for chain saw users 23

Figures

- 1** — Electric chain saw (Type 2) hand guard alternative dimension 18
- 2** — Carburetor adjustments 19
- 3** — Throttle control linkage test procedure 20
- 4** — Set-up for determining sideways balance 21
- 5** — Probe for fuel line integrity testing 22
- 6** — Set-up for determining holding moment 22