



CSA Z150:20

National Standard of Canada



Safety code on mobile cranes



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Safety code on mobile cranes



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Contents

Technical Committee on Mobile Cranes	4
Preface	7
1 Scope	9
2 Reference publications	10
3 Definitions	13
4 Construction and characteristics of mobile cranes	19
4.1 Load ratings	19
4.1.1 Ratings governed by crane stability	19
4.1.2 Ratings governed by structural competence	19
4.1.3 Load rating information	20
4.2 Backward stability	22
4.2.1 Overview	22
4.2.2 General conditions	22
4.2.3 Acceptable stability conditions	22
4.2.4 Limitation on boom length or boom angle	23
4.3 Boom-hoist, load-hoist, and telescopic boom mechanisms	23
4.3.1 Boom-hoist mechanism	23
4.3.2 Load-hoist mechanism	24
4.3.3 Load-hoist brakes	25
4.3.4 Adjustments	25
4.3.5 Anti-two-block device	25
4.3.6 Telescoping boom	26
4.4 Swing mechanism	26
4.4.1 Swing control	26
4.4.2 Swing brake and locking device	26
4.5 Crane travel	26
4.5.1 Travel controls	26
4.5.2 Travel mechanism	27
4.5.3 Travel brakes and locks	27
4.6 Controls	27
4.7 Ropes and reeving accessories	28
4.7.1 Rope design factors	28
4.7.2 Wire ropes	29
4.7.3 Wire rope fittings and terminations	29
4.7.4 Synthetic rope	31
4.7.5 Sheaves	31
4.7.6 Sheave sizes	31
4.7.7 Load hooks and hook blocks	32
4.8 Cabs	32
4.8.1 Construction	32
4.8.2 Platforms for cab	33

4.8.3	Access to cab	33
4.8.4	Emergency exit	33
4.8.5	Cab roof	33
4.8.6	Cab accessories	33
4.9	General requirements	34
4.9.1	Booms	34
4.9.2	Exhaust gases	34
4.9.3	Outriggers	34
4.9.4	Welded construction	35
4.9.5	Guards for moving parts	35
4.9.6	Clutch and brake protection	35
4.9.7	Hydraulic line protection	35
4.9.8	Lubricating points	35
4.9.9	Miscellaneous equipment	35
4.9.10	Locomotive crane equipment	36
4.10	Hydraulic and pneumatic systems	36
4.11	Manufacturer's manual	36
4.12	Testing	37
4.12.1	Functions test	37
4.12.2	Load test for new and integrated cranes	37
4.13	Rerating	37
4.14	Cranes used for other than lifting service	37
5	Inspection, testing, and maintenance	38
5.1	General	38
5.2	Crane log	38
5.2.1	Preparation and disposition	38
5.2.2	Format	38
5.3	Inspection	39
5.3.1	General	39
5.3.2	Inspection classification	39
5.3.3	Daily inspection	40
5.3.4	Periodic inspection	41
5.3.5	Annual inspection	42
5.3.6	Operational aids	44
5.3.7	Cranes not in regular use	44
5.4	Maintenance	45
5.4.1	Preventive maintenance	45
5.4.2	Maintenance procedure	45
5.4.3	Adjustments and repairs	46
5.4.4	Lubrication	47
5.5	Rope and rope sheaves	47
5.5.1	General	47
5.5.2	Daily inspection	47
5.5.3	Periodic and annual inspection	48
5.5.4	Rope replacement	49
5.5.5	Rope maintenance	50
5.5.6	Rope sheaves	50

6	Operation	51
6.1	General	51
6.1.1	Operator qualification	51
6.1.2	Prior to use	51
6.1.3	Supporting ground, foundation, or structure	52
6.1.4	Positioning of the crane	52
6.1.5	Assembly/disassembly procedure	52
6.1.6	Assembly and dismantling of lattice booms	54
6.2	Unsafe equipment	55
6.3	Weather conditions	56
6.4	Operating practices	56
6.4.1	General practices	56
6.4.2	Unattended cranes	58
6.4.3	Handling loads	59
6.4.4	Operational aids	60
6.4.5	Multiple crane lifts	60
6.4.6	Travelling a crane	61
6.4.7	Negotiating slopes	61
6.4.8	Personnel lifting	61
6.4.9	Operating near electrical power lines	66
6.5	Signalling	67
6.5.1	General	67
6.5.2	Standard signals	68
6.5.3	Signal person qualifications	68
6.5.4	Standard hand signals	68
6.5.5	Standard voice signals	68
6.5.6	Audible travel signals	69
6.5.7	Special signals	69
6.5.8	Audible emergency signal	69
6.6	Cranes and components in transit	69
6.7	Locomotive cranes	70
6.7.1	Rail clamps	70
6.7.2	Rerailing locomotive cranes	70
6.7.3	Swinging locomotive cranes	70

Annex A (informative)	— Mobile crane types	76
Annex B (informative)	— Crane parts	84
Annex C (informative)	— Work areas	88
Annex D (informative)	— Backward stability	97
Annex E (informative)	— Wedge socket attachments	105
Annex F (informative)	— Sample crane log	108
Annex G (informative)	— Responsibilities of management and operators	113
Annex H (informative)	— Examples of platforms for personnel lifting	114
Annex I (normative)	— International hand signals	116

Technical Committee on Mobile Cranes

A. L. Brisson	Objective Engineering Inc., Ingersoll, Ontario, Canada <i>Category: General Interest</i>	<i>Chair</i>
J. L. Lapointe	Union internationale des opérateurs-ingénieurs Local 905, Saint-Léonard, Quebec, Canada <i>Category: User Labour</i>	<i>Vice-Chair</i>
D. Albrecht	WorkSafe BC, Richmond, British Columbia, Canada <i>Category: Regulatory Authority</i>	
B. Alexander	Operating Engineers Training Institute of Ontario, Oakville, Ontario, Canada <i>Category: User Labour</i>	
S. Aubin	CAMTECH Consultants inc., Boucherville, Quebec, Canada <i>Category: General Interest</i>	
R. Balbaa	HITE Engineering Corp., Mississauga, Ontario, Canada <i>Category: General Interest</i>	
K. Burla	International Union of Operating Engineers Local 793, London, Ontario, Canada	<i>Non-voting</i>
K. Buschmann	Uniropo Ltd., Mississauga, Ontario, Canada <i>Category: General Interest</i>	
G. Chartier	Canadian Coast Guard, Ottawa, Ontario, Canada	<i>Non-voting</i>
J. F. Desmarais	CNESST, Montréal, Québec, Canada <i>Category: Regulatory Authority</i>	<i>Non-voting</i>
D. Domenichini	VIM Technical Ltd., Brampton, Ontario, Canada <i>Category: General Interest</i>	

D. A. Ehler	Nova Scotia Dept. of Labour and Advanced Education, Dartmouth, Nova Scotia, Canada <i>Category: Regulatory Authority</i>	
R. J. Foran	Foran's Training Inc., Hamilton, Ontario, Canada <i>Category: User Management</i>	
J. Gomes	Ontario Ministry of Labour, Training and Skills Development, Thunder Bay, Ontario, Canada	<i>Non-voting</i>
B. Groff	Link-Belt Cranes, Lexington, Kentucky, USA <i>Category: Producer Interest</i>	
R. Kalsi	Sterling Crane, Edmonton, Alberta, Canada <i>Category: User Management</i>	
F. Khan	Ontario Ministry of Labour, Training and Skills Development, Toronto, Ontario, Canada <i>Category: Regulatory Authority</i>	
G. McLean	Ministry of Energy, Mines & Natural Gas, Prince George, British Columbia, Canada <i>Category: Regulatory Authority</i>	
J. Ouellet	CNESST, Montréal, Québec, Canada <i>Category: Regulatory Authority</i>	
M. Parnell	Industrial Training International, Inc., Woodland, Washington, USA <i>Category: General Interest</i>	
B. Parr	Atlas Polar Co. Ltd., Toronto, Ontario, Canada <i>Category: Producer Interest</i>	
D. Pauwels	Liebherr-Canada Ltd., Acheson, Alberta, Canada <i>Category: Producer Interest</i>	

S. A. Sanders	Manitowoc Crane, Shady Grove, Pennsylvania, USA <i>Category: Producer Interest</i>	
T. Tapley	Irving Equipment, Saint John, New Brunswick, Canada <i>Category: User Labour</i>	
B. Van Engelen	Liebherr-Canada Ltd., Acheson, Alberta, Canada <i>Category: Producer Interest</i>	
J. Vermeire	Mammoet, Edmonton, Alberta, Canada <i>Category: User Management</i>	
S. Wood	Terex Corporation, Nicholasville, Kentucky, USA	<i>Non-voting</i>
J. Zick	Manitowoc Cranes, Manitowoc, Wisconsin, USA	<i>Non-voting</i>
A. Holbeche	CSA Group, Toronto, Ontario, Canada	<i>Project Manager</i>

Preface

This is the fifth edition of CSA Z150, *Safety code on mobile cranes*. It supersedes the previous editions published in 2016, 2011, 1998, and 1974.

This Standard is designed to

- guard against and minimize injury to workers, and otherwise provide for the protection of life, limb, health, and property, by specifying minimum safety requirements for mobile cranes;
- provide direction and guidance to manufacturers and buyers of mobile cranes regarding the minimum standards expected of such machines in Canada;
- provide direction and guidance to owners, employers, supervisors, workers, users, and others concerned with, responsible for, or involved in the application and use of mobile cranes; and
- guide Canadian federal, provincial/territorial, and other regulatory bodies in the development and promulgation of appropriate health and safety legislation and directives concerning mobile cranes.

This edition includes the following changes:

- revised requirements on
 - wire rope and synthetic rope;
 - annual inspection;
 - assembly/disassembly;
 - cranes not in regular use;
 - boom disassembly; and
 - personnel lifting (wind speed); and
- changes for clarity.

This Standard was developed by CSA Group with funding support provided by the Canadian Association of Administrators of Labour Law — Occupational Safety and Health (CAALL-OSH), including Provincial and Territorial Governments, as well as the Government of Canada. CSA Group is solely responsible for the content of this Standard, and CSA Group and the funding bodies disclaim any liability in connection with the use of the information contained herein.

This Standard was prepared by the Technical Committee on Mobile Cranes, under the jurisdiction of the Strategic Steering Committee on Occupational Health and Safety, and has been formally approved by the Technical Committee.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Notes:

- 1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- 2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
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 - b) *provide an explanation of circumstances surrounding the actual field condition; and*

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 - d) *rationale for the change.*

CSA Z150:20

Safety code on mobile cranes

1 Scope

1.1

This Standard describes the design, construction, load rating, installation, erection, inspection, maintenance, repair, modification, test, and operation of lattice and telescopic boom mobile cranes.

Note: See Annex [A](#) for illustrations of mobile cranes and Annex [B](#) for illustrations of parts of a mobile crane.

1.2

This Standard applies only to machines that have all of the following fundamental characteristics:

- a) the crane comprises, or is mounted on, a non- or self-propelled, crawler- or wheel-mounted mobile base;
- b) the crane is designed and manufactured for the primary purpose of hoisting and lowering loads by means of tackle suspended from a boom;
- c) the boom is lattice or telescopic and capable of being elevated and lowered in the vertical plane and of being rotated (swung) from side to side in the horizontal plane;
- d) the tackle is suspended from the boom and is capable of being increased and diminished in length; and
- e) the crane utilizes an engine(s) or motor(s) of sufficient power to
 - i) elevate and lower the boom in the vertical plane with the load suspended from the tackle;
 - ii) rotate (swing) the boom in the horizontal plane with the load suspended from the tackle;
 - iii) increase and diminish the length of the tackle with the load suspended from the tackle; and
 - iv) in the case of a self-propelled crane, propel the vehicle, carrier, or base on which or to which the boom and hoist mechanism is attached.

1.3

This Standard applies to crawler-mounted cranes, commercial truck-mounted cranes, boom trucks, wheel-carrier-mounted cranes, railway cranes, locomotive-mounted cranes, and rail-mounted cranes, as well as any variations thereof that retain the fundamental characteristics of these cranes.

1.4

This Standard is applicable only to machines when they are used for lifting (hoisting).

Note: Some basic machine types within this scope are used alternatively for hoisting service and for applications not considered to be hoisting service. All of the requirements of this Standard are applicable to such machines when used for hoisting service. Clause [4.14](#) contains requirements for machines when used in other than hoisting service.

1.5

Machines within the scope of Clause [1.3](#), and equipped with hooks, magnets, grapples, clam shell buckets, orange peel buckets, and other devices intended to connect or attach the tackle to the load for the purpose of hoisting or lowering a freely suspended load, are considered to be in lifting (hoisting) service.