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For more information concerning the history of these regulations, please see the [Table of Regulations](#).

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CHAPTER E-5

ELEVATORS AND LIFTS ACT

REGULATIONS

Made by the Lieutenant Governor in Council under the *Elevators and Lifts Act* R.S.P.E.I. 1988, Cap. E-5

PART I

1. (1) In these regulations
- | | Definitions |
|---|-----------------------|
| (a) "Act" means the <i>Elevators and Lifts Act</i> R.S.P.E.I. 1988, Cap. E-5; | Act |
| (b) "anti-rollback device" means a mechanical device installed on the prime mover of an incline lift to prevent the rope or cable from moving backwards when the power is removed from the rope or cable; | anti-rollback device |
| (c) "attendant" means a person who is in charge of a loading or unloading station of an incline lift; | attendant |
| (c.1) "chair ropeway" means a device with chairs attached to an overhead rope or cable used to transport passengers above a surface; | chair ropeway |
| (d) "closed type" when referring to handholds, means a cupshaped device in which the handgrip surface is available only in the direction of travel and is covered on the opposite run; | closed type |
| (e) "Code" means the Canadian Standards Association CSA Standard CAN/CSA-B44-07 Safety Code for Elevators and Escalators; | Code |
| (f) "drive sheave" means a sheave that drives the main rope or cable on an elevating device; | drive sheave |
| (g) "enforcing authority" means the Electrical and Elevator Inspection Division of the Department of Community and Cultural Affairs; | enforcing authority |
| (h) "existing installation" means an installation for which, prior to June 1, 1971 | existing installation |
| (i) all work of the installation was completed, or | |
| (ii) the plans and specifications were filed with the enforcing authority and work started not later than six months after the approval of the plans and specifications, | |

	but does not include an installation moved to a new location;
factor of safety	(i) “factor of safety” means the ultimate breaking strength of the material divided by the maximum design load;
handhold	(j) “handhold” used in Part IV, means a device attached to the belt to assist a passenger in maintaining balance;
installation	(k) “installation” means a complete elevating device and includes its hoistway, hoistway enclosure and related construction and all machinery and equipment necessary for its operation;
J. bar, T. bar, or platter pull	(l) “J. bar”, “T. bar”, or “platter pull” means a method of transportation that pulls a skier riding on his skis by means of an attachment to a main overhead rope or cable;
lifts for persons with physical disabilities	(l.1) “lifts for persons with physical disabilities” means lifts that are specifically used by physically disabled persons travelling between fixed points of a building or structure;
machine	(m) “machine” means an apparatus for applying mechanical power to an elevating device;
new installation	(n) “new installation” means any installation not classed as an existing installation;
operator	(o) “operator” means a person who operates an elevating device;
rated speed	(p) “rated speed” means the speed for which the elevating device is designed to operate;
rope, wire rope and cable	(q) “rope”, “wire rope” and “cable” used in Part VI are interchangeable, except for rope tows, where “rope” means a fibre or other rope manufactured for rope tows
rope tow	(r) “rope tow” means a type of transportation that pulls the skier riding on his skis while the skier manually grasps the endless rope;
safety gate	(s) “safety gate” means a device that automatically stops the rope tow, J bar, T bar or platter pull when actuated by a person’s weight or contact;
step or platform	(t) “step” or “platform” used in Part IV, means a passenger carrying unit;
tow grippers	(u) “tow grippers” means straps, ropes or other devices used to fasten the passenger’s hand or body to the hauling rope of a rope tow; and
Trades Qualification Certificate	(u.1) “Trades Qualification Certificate” means a certificate issued by the International Union of Elevator Constructors or an Elevator

Technical Certificate issued by the National Association of Elevator Contractors.

(v) revoked by EC495/08;

chair ropeway

(w) revoked by EC495/08.

lifts for persons
with physical
disabilities

(2) Definitions listed in clause 1.3 of the Code apply to these regulations unless defined in subsection (1) or the Act. (EC469/71; 392/76; 283/80; 87/84; 665/86; 169/91; 285/93; 639/93; 500/96; 495/08)

Application

PART II CSA REGULATIONS

2. (1) Except as provided in these regulations the standards governing the design, construction, installation, operation, inspection, testing, maintenance, alteration and repair of elevators, dumbwaiters, escalators and their hoistways shall be those set forth in the Code.

Application of CSA
regulations

(2) Except as provided for in these regulations, the standards governing the design, manufacture, construction, modification, operation, inspection, testing and maintenance of chair ropeways, J bars, T bars, platter pulls and rope tows shall be those set forth in CSA Standard CAN/CSA-Z98-07 Passenger Ropeways.

Idem

(3) Except as provided for in these regulations the standards governing the design, manufacture, construction, installation, operation, inspection and testing of lifts for physically disabled persons shall be those set forth in CSA Standard B-355-00 Lifts for Persons With Physical Disabilities and amendments published thereto.

Idem

(4) Except as otherwise provided in these regulations, the standards governing the maintenance requirements and service intervals for elevators, dumbwaiters, escalators, and moving walks shall be those set forth in the CSA Standard Appendix J, B44-04.

Standards

(5) Except as otherwise provided in these regulations, the standards governing the design, manufacture, construction, installation, operation, inspection and testing of elevating platforms in wind turbines shall be those set forth in the CSA Standard CAN/CSA-Z271-98. (EC469/71; 285/93; 500/96; 495/08; 495/08; 221/09)

Idem

PART III
GENERAL

Workmanship	3. (1) In the installation of all the work governed by these regulations, special attention shall be paid to the mechanical execution of the work.
<i>Idem</i>	(2) Work badly arranged or poorly executed will not be approved. (EC469/71)
Exceptions	4. (1) These regulations and the Code do not apply to <ul style="list-style-type: none"> (a) wharf ramps; (b) private residence elevators; (c) private residence incline lifts; and (d) private residence incline elevators; (e) special purpose personnel elevators; (f) shipboard elevators; and (g) mine elevators.
Deviations	(2) Deviations from the requirements of these regulations in cases of practical difficulty or unnecessary hardship may be made only where it is evident that reasonable safety is assured and only with the written permission of the Chief Inspector. (EC469/71; 495/08)
Respirators	5. Every elevator installed in a location where the possibility of the presence of noxious gases exists shall be provided with suitable respirators stored in containers in the car and readily available to passengers and they shall be checked periodically and checked or replaced after being used. (EC469/71)
Guards	6. (1) Where a sheave or sheaves are installed in the car crosshead for the hoisting ropes, a proper guard shall be installed over and under these sheaves in order to prevent objects or persons from becoming entangled between the ropes and the sheaves.
<i>Idem</i>	(2) A proper guard shall be installed around all openings in the machine room floor to prevent objects from accidentally being dropped down the hoistway. (EC469/71)
Inspection and testing	7. (1) After the completion of an installation, the elevating device including safety and electrical protective devices, shall be tested in the presence of an inspector to determine if they are functioning properly.
Certificate of Inspection	(2) A Certificate of Inspection for each installation must be issued before it is placed into service. (EC469/71)
Electrical equipment and wiring	8. All electrical equipment and wiring shall conform to the requirements of the latest authorized edition of the Canadian Electrical Code Part I and any amendments, variations, additions or deletions made by the

Lieutenant Governor in Council pursuant to the *Electrical Inspection Act* R.S.P.E.I. 1988, Cap. E-3. (EC469/71)

9. (1) Before commencing a new installation the person making it shall deliver to the Chief Inspector not less than seventy-two hours before starting any work, other than excavation, written notification of the day he will so commence.

Installations

(2) When a person completes a new installation the person making it shall notify the Chief Inspector not less than seventy-two hours before the date on which an inspection is required.

Notification

(3) Every installation or part thereof for which no specific provision is made in the Code or these regulations shall be subject to the approval of the Chief Inspector. (EC469/71)

Approval of Chief Inspector

9.1 (1) A person who wishes to apply for a contractor's license shall

(a) submit a completed application to the Chief Inspector on a form approved by the Chief Inspector;

(b) provide such proof of the matters referred to

(i) in subsection (2), where the person is applying for a contractor's license Class A, or

(ii) in subsection (3), where the person is applying for a contractor's license Class B

and such other information as the Chief Inspector may require; and

(c) pay the application fee of \$300.

Application for a contractor's licence

(2) The Minister may issue a contractor's licence Class A to an applicant or to the employer of an applicant, on the approved form, if the Minister is satisfied that the applicant

Contractor's license, Class A

(a) holds a valid Trades Qualification Certificate as an elevator mechanic, or its equivalent, issued by

- (i) the government of a province or territory of Canada,
- (ii) the government of a state or territory of the United States of America, or
- (iii) a regulatory body acceptable to the Chief Inspector;

(b) has at least two years experience in the installation of elevating devices using the CSA Standard CAN/CSA-B44-07, CAN/CSA-Z98-07 and CSA Standard B-355-00; or

(c) holds a license issued by another province or territory of Canada that the Chief Inspector considers to be equivalent to a contractor's license issued under these regulations.

(3) The Minister may issue a contractor's licence Class B to an applicant or to the employer of an applicant, on the approved form, if the Minister is satisfied that the applicant is a Certified Accessibility

Contractor's license, Class B

Technician certified by the National Association of Elevator Contractors, and

- (a) has at least two years experience in the installation of lifts for persons with physical disabilities under CSA Standard B-355-00, or
- (b) holds a license issued by another province or territory of Canada that the Chief Inspector considers to be equivalent to a contractor's license issued under these regulations.

Validity of license

(4) A license issued under subsection (2) or (3) is valid for a period not exceeding 36 months from the date of its issuance, as shown on the license.

Contractor's license, Class A

(5) A person who has been issued a contractor's license Class A is a licensed elevator mechanic authorized to work on all elevator and lifting devices under CSA Standard CAN/CSA-B44-07, CAN/CSA-Z98-07 and CSA Standard B-355-00.

Contractor's license, Class B

(6) A person who has been issued a contractor's license Class B is a Certified Accessibility Technician authorized to work on lifts for disabilities only under CSA Standard B-355-00. (EC495/08)

Application for an installer's registration

9.2 (1) A person who wishes to apply for an installer's registration shall

- (a) submit a completed application to the Chief Inspector on a form approved by the Chief Inspector;
- (b) provide such proof of the matters referred to
 - (i) in subsection (2), where the person is applying for an installer's registration Level I, or
 - (ii) in subsection (3), where the person is applying for an installer's registration Level II

and such other information as the Chief Inspector may require; and

- (c) pay the application fee of \$60.

Installer's registration Level I

(2) The Minister may issue an installer's registration Level I to an applicant, on the approved form, if the Minister is satisfied that the applicant is the holder of

- (a) a valid Trades Qualification Certificate as an elevator mechanic, or its equivalent, issued by
 - (i) the government of a province or territory of Canada,
 - (ii) the government of a state or territory of the United States of America, or
 - (iii) a regulatory body acceptable to the Chief Inspector;
- (b) a certification issued by the International Union of Elevator Constructors on the successful completion of the Canadian Elevator Industry Education Program; or

(c) an Elevator Technician Certificate issued by the National Association of Elevator Contractors.

(3) The Minister may issue an installer's registration Level II to an applicant, on the approved form, if the Minister is satisfied that the applicant holds a valid Accessibility Technician certificate issued by the National Association of Elevator Contractors.

Installer's
registration Level II

(4) An installer's registration issued under subsection (2) or (3) is valid for a period not exceeding 36 months from the date of its issuance, as shown on the registration.

Validity of
registration

(5) A person who has been issued an installer's registration Level I is authorized to work on all elevator and lifting devices.

Installer's
registration Level I

(6) A person who is issued an installer's registration Level II is authorized to work on accessibility lifts only.

Installer's
registration Level II

(7) No person who holds an installer's registration Level I or an installer's registration Level II shall install, construct, re-construct, maintain or alter an accessibility lift or any elevating device unless the person is employed and under the direction of a Licensed Contractor. (EC495/08)

Prohibition

9.3 The fees for an application for a license or registration issued under section 9.1 or 9.2 shall be made payable to the Provincial Treasurer. (EC495/08)

Fees

9.4 The Minister may suspend or revoke a contractor's license or an installer's registration if the Minister is satisfied that one or more of the following conditions apply:

Suspension,
revocation of
license, registration

- (a) the holder of the license or registration has been convicted of two or more offences under the Act or these regulations;
- (b) the holder of the license or registration has obtained the license or registration through misrepresentation or fraud;
- (c) the holder of the license or registration has allowed another person to use the license or registration as if it were that other person's license or registration. (EC495/08)

PART IV MANLIFTS

GENERAL REQUIREMENTS

10. (1) Floor openings for both the "up" and "down" runs of manlifts shall be

Floor openings

	(a) not less than twenty-eight inches nor more than thirty-six inches in width for a twelve-inch belt;
	(b) not less than thirty-four inches nor more than thirty-eight inches for a fourteen-inch belt; or
	(c) not less than thirty-six inches nor more than forty inches for a sixteen-inch belt.
Floor opening	(2) All floor openings for a given manlift shall be uniform in size and shall be approximately circular, and each shall be located vertically above the opening below it. (EC469/71)
Landings	11. (1) The clearance between the floor or mounting platform and the lower edge of the conical guard above it required by section 14 shall not be less than seven feet six inches and where this clearance cannot be obtained, no access to the manlift shall be provided and the manlift runway shall be enclosed where it passes through such floor.
Adjacent floor space	(2) The floor space adjacent to the floor openings shall be free from obstructions and kept clear at all times. (See also subsection 56(2).)
Adequate lighting	(3) Adequate lighting of not less than three footcandles shall be provided at each floor landing at all times when the lift is in operation.
Landing surfaces	(4) The landing surfaces at the entrances and exits to the manlift shall be so constructed and maintained as to provide safe footing at all times and the coefficient of friction shall not be less than 0.5. (EC469/71)
Emergency landings	12. (1) Where there is a travel of fifty feet or more between floor landings, one or more emergency platforms shall be provided so that there will be a landing for every twenty-five feet or less of manlift travel.
Accessibility	(2) Such emergency landings shall be accessible from both runs of the manlift and shall give access to the ladder required in sections 26 and 27.
Enclosed platforms	(3) Emergency platforms shall be enclosed except for the entrances with a standard railing and toeboard. (EC469/71)
<i>Idem</i>	13. Emergency platforms may be arranged to give access to vertical bucket conveyors or other equipment for the purpose of inspection, lubrication and repair, and runways to such equipment will be considered part of the emergency platform and shall be provided with standard railings and toeboards. (EC469/71)
Floor opening guards	14. On the ascending side of the manlift all landings shall be provided with a bevel guard or cone meeting the following requirements: (a) the bevel guard or cone shall make an angle of not less than forty-five degrees with the horizontal, and an angle of sixty degrees or greater shall be used where ceiling heights permit;

(b) the bevel guard or cone shall extend at least forty-two inches outward from any handhold on the belt, and it shall not extend beyond the upper surface of the floor above; and

(c) the bevel guard or cone shall be made of not less than No. 18 U.S. gauge sheet metal steel or material of equivalent strength or stiffness, the lower edge shall be rolled to a minimum diameter of one-half inch and the interior shall be smooth with no rivets, bolts or screws protruding.

NOTE: Cones on the down run of the belt serve as fairly effective fire stops and tend to prevent the loss of warm air from lower floors. (EC469/71)

15. The entrances and exits at all floors or landings affording access to the manlift shall be guarded by a maze (staggered railing) or a handrail equipped with self-enclosing gates. (EC469/71) Protection of entrances and exits

16. The rails shall be standard guardrails with toeboards meeting the following requirements: Rails

(a) a standard guardrail with toeboards is a double rail of two inches by four inches wood, forty-two inches high with an intermediate rail twenty-one inches above the floor with a toeboard; and

(b) toeboards shall be one inch by six inches board or sheet metal one-eighth inch by six inches and shall be securely attached to the uprights. (EC469/71)

17. Gates, if used, shall open outward, and shall be self-closing, and corners shall be rounded. (EC469/71) Gates

18. (1) A maze of staggered openings shall offer no direct passage between enclosure and outer floor space. Staggered openings

(2) Rails shall be located at least two feet from the edge of openings measured at right angles to the face of the belt and the intersection of the top rail and the end post at openings shall be a bend or standard long sweep "ell". Rails

(3) Except where building layout prevents, entrances at all landings shall be in the same relative position. (EC469/71) Entrance positions

19. The floor opening at each landing shall be guarded on sides not used for entrance or exit by a standard railing and toeboard or by panels of wire mesh of not less than No. 10 U.S. gauge, expanded metal of not less than No. 13 U.S. gauge or sheet metal of equivalent strength or metal on a frame of angle iron not less than 1 1/4" by 11/4" by 1/8" or of 1 1/4" pipe. (EC469/71) Guards for openings

Size of guards	20. (1) The rails or guards referred to in section 19 shall be at least forty-two inches in height on the up-running side and sixty-six inches on the down-running side.
Guardrails	(2) If a guardrail is used, the section of the guard above the rail may be of the construction specified in section 19 or may consist of vertical or horizontal bars which will reject a ball six inches in diameter.
Location	(3) Rails or guards shall be located not more than one foot from the edge of the floor opening. (EC469/71)
Bottom arrangement	21. (1) At the bottom landing the clear area shall not be smaller than the area enclosed by the guardrails on the floors above, and any wall in front of the down-running side of the belt shall not be less than forty-eight inches from the face of the belt. (EC469/71)
No encroachment	(2) Such area shall not be encroached upon by stairs or ladders. (EC469/71)
Pulley supported by low landing	22. The lower (boot) pulley shall be installed so that it is supported by the lowest landing served. (EC469/71)NOTE: Allowance for belt stretch should be made in the original layout.
Mounting platform	23. A mounting platform shall be provided in front or to one side of the up-run at the lowest landing, unless the floor or platform level shall be at or above the point at which the upper surface of the ascending step assumes a horizontal position. (EC469/71)
Top clearances	24. (1) A top clearance shall be provided of at least eleven feet above the top terminal landing, and this clearance shall be maintained from a plane through each face of the belt to a vertical cylindrical plane having a diameter two feet greater than the diameter of the floor opening, extending upward from the top floor to the ceiling on the up-running side of the belt.
No encroachment	(2) No encroachment of structural or machine supporting members within the space mentioned in subsection (1) will be permitted. (EC469/71)
Clearance	25. (1) There shall be a clearance of at least five feet between the centre of the head pulley shaft and any ceiling obstruction.
Height of head pulley shaft	(2) The centre of the head pulley shaft shall not be less than six feet above the top terminal landing. (EC469/71)
Emergency exit ladders	26. A fixed metal ladder accessible from both the “up” and “down” run of the manlift shall be provided where the vertical distance between landings exceeds twenty feet. (EC469/71)

27. (1) The ladder required by section 26 shall be in accordance with the following:

Specifications

- (a) metal side rails when made of mild steel or wrought iron shall not be less than 9/16" in cross section for lengths twelve feet and under, and not less than 3/4" in cross section for lengths over twelve feet with a minimum thickness not less than 3/8", and when so made the dimensions shall be based upon the removal of not more than 1/2" of material for the attachment of the steps, and where more material is removed from the side rails for step attachments or when side rails are made of other metal or shapes, they shall be equivalent thereto in strength; or
- (b) manlifting supporting members may be used as side rails.

(2) Metal rungs of the ladder required by section 26

Metal rungs

- (a) when made of solid round steel shall have a minimum center diameter of 5/8" and tenon diameter of 1/2";
- (b) when made of pipe shall not be smaller than one inch standard steel pipe; and
- (c) when made of angle section shall have minimum dimensions of 3/4" x 1/8" x 1/8".

(3) Metal treads if used in the ladder required by section 26

Metal treads

- (a) shall have a width as specified in the following table:

LENGTH OF TREADS (inches)	WIDTH (inches)
Up to and including 16	3
Over 16, up to and including 20	3 1/4
Over 20, up to and including 24	3 1/2
Over 24, up to and including 28	4
Over 28, up to and including 32	4 1/2

- (b) shall be a channel or equivalent section equal in strength to support 250 pounds applied to the middle of the tread without appreciable deflection. (EC469/71)

28. Both runs of the manlift shall be illuminated at all times when the lift is in operation, and an intensity of not less than one foot-candle shall be maintained at all points. (EC469/71)

Illumination

NOTE: For illumination of landings, see subsection 11(3). (EC469/71)

29. (1) Lighting of manlift runways shall be by means of circuits permanently tied in to the building circuits (no switches), or shall be arranged to be turned on by the starting switch controlling the manlift motor, or shall be controlled by switches at each landing.

Lighting circuits

Switches (2) Where separate switches are provided at each landing, any switch shall turn on all lights necessary to illuminate the entire runway. (EC469/71)

MECHANICAL REQUIREMENTS

Machines **30.** Machines shall be of the direct-connected type or shall be driven by multiple v-belts and cast iron gears shall not be used. (EC469/71)

Brakes **31.** (1) A mechanically-applied, electrically-released brake shall be applied to the motor shaft for direct-connected units or to the input shaft for belt-driven units.

Break specifications (2) The brake shall be capable of stopping and holding the manlift when the descending side is loaded with 250 pounds on each step. (EC469/71)

Design **32.** The machine shall be designed and constructed to catch and hold the driving pulley in the event of shaft failure. (EC469/71)

Belt **33.** (1) The belt shall be of hard-woven canvas, rubber-coated canvas, leather, or other material meeting the strength requirements of subsection (3), and having a coefficient of friction such that when used in conjunction with an adequate tension device it will meet the brake test specified in section 31.

Belt width (2) The width of the belt shall not be less than

- (a) twelve inches for a total travel not exceeding 100 feet;
- (b) fourteen inches for a travel greater than 100 feet but not exceeding 150 feet; and
- (c) sixteen inches for a travel exceeding 150 feet.

Belt strength (3) The strength of the belt shall not be less than

- (a) 1500 pounds per inch of belt width for belts having a distance between pulley centres not in excess of 100 feet;
- (b) 1800 pounds per inch of belt width for belts having a distance between pulley centres of over 100 feet but not in excess of 200 feet; and
- (c) 2450 pounds per inch of belt width for belts having a distance between pulley centers of over 200 feet.

Belt fastening (4) Belts shall be fastened by a lapped splice or shall be butt spliced with a strap on the side of the belt away from the pulley.

Belt overlap (5) For lapped splices, the overlap of the belt at the splice shall be not less than three feet where the total travel of the manlift does not exceed

one hundred feet and not less than four feet if the travel exceeds one hundred feet.

(6) Where butt splices are used the straps shall extend not less than three feet on one side of the butt for a travel not in excess of one hundred feet, and four feet for a travel in excess of one hundred feet.

Butt splices

(7) For twelve inch belts, the joint shall be fastened with not less than twenty special elevator bolts, each of a minimum diameter of 1/4" and the bolts shall be arranged so as to cover the area of the joint effectively.

Joints

(8) The minimum number of bolts for a belt width of fourteen inches shall not be less than twenty-three, and for belt widths of sixteen inches, the number of bolts shall not be less than twenty-seven.

Bolts

(9) Drive pulleys and idler (boot) pulleys shall have a minimum strength and diameter not less than given in the following table:

Pulleys

Belt Construction	Minimum Strength (Lb. per Inch of Width)	Minimum Pulley Diameter (Inches)
5 ply	1500	20
6 ply	1800	20
7 ply	2100	22

(The above values are based on 32 oz. duck: 300 lb. per linear inch per ply.) (EC469/71)

34. (1) No manlift designed for a speed in excess of eighty feet per minute shall be installed except upon special permission of the Chief Inspector.

Speed

(2) To take care of variations in voltage, weights of materials, etc., the actual free running speed of the belt (no load) may exceed contact speed by not more than ten per cent.

Free running speed ratio

(3) All manlifts in a given plant should run at approximately the same speed. (EC469/71)

Same speed

35. Steps or platforms shall be not less than twelve inches nor more than fourteen inches deep, measured from the belt to the edge of the step or platform. (EC469/71)

Platforms or steps

36. The width of the step or platform shall not be less than the width of the belt to which it is attached. (EC469/71)

Width

37. The distance between steps shall be equally spaced and not less than sixteen feet apart measured from the upper surface of one step to the upper surface of the next step above it. (EC469/71)

Distance between steps

Surfaces	38. The surface of the step shall make approximately a right angle with the “up” and “down” run of the belt, and shall travel in an approximately horizontal position with the “up” and “down” run of the belt. (EC469/71)
Material	39. The upper or working surfaces of the step shall be of a material having inherent nonslip characteristics (coefficient of friction not less than 0.5) or shall be covered completely by a nonslip tread securely fastened to it. (EC469/71)
Strength	40. When subjected to a load of 400 pounds applied at the approximate centre of the step, step frames or supports and their guides shall be of adequate strength to <ul style="list-style-type: none"> (a) prevent the disengagement of any step roller; (b) prevent any appreciable misalignment; and (c) prevent any visible deformation of the step or its support. (EC469/71)
Corresponding handhold	41. (1) No step shall be provided unless there is a corresponding handhold above or below it meeting the requirements of section 42. (2) If a step is removed the handholds immediately above and below it shall be removed before the lift is again placed in service. (EC469/71)
Handholds	42. Handholds attached to the belt shall be provided and so installed that they are not less than four feet nor more than four feet eight inches above the step tread, and these shall be available on both the “up” and “down” run of the belt. (EC469/71)
Grab surface	43. The grab surface of the handhold shall not be less than 4 1/2” in width. (EC469/71)
Strength	44. The handhold shall be capable of withstanding without damage a load of 300 pounds applied to the run of the belt. (EC469/71)
Corresponding step	45. No handhold shall be provided without a corresponding step, and if a handhold is removed the corresponding step and handhold for the opposite direction of travel shall also be removed before the lift is again placed in service. (EC469/71)
Closed type	46. All handholds shall be of the closed type. (EC469/71)
Stop devices	47. (1) Two separate automatic stop devices shall be provided to cut off the power and apply the brake when a loaded step passes the upper terminal landing.
Mechanical step device	(2) One of these shall consist of a switch mechanically operated by the belt or step roller.

(3) The second may consist of any of the following:

- (a) a roller switch placed above and out of line with the first limit switch; Other step device
- (b) photocell and light source (electric eye); or
- (c) a switch actuated by a lever, rod or plate, the latter placed above the head pulley so as to just clear a passing step. (EC469/71)

48. (1) After the manlift has been stopped by a device required by section 47, it shall be necessary to reset the automatic stop manually. Resetting

(2) The device shall be so located at the top landing that a person resetting it shall have a clear view of both the “up” and “down” runs of the manlift. Location

(3) It shall not be possible to reset the device from any step or platform. (EC469/71) No reset from step

49. The device required by section 47 shall function so that the manlift will be stopped before the loaded step has reached a point twenty-four inches above the top terminal landing. (EC469/71) Stop limits

50. (1) Where such switches open the main motor circuit directly they shall be of the multipole type. Types of devices

(2) Where photoelectric devices are used they shall be so designed and installed that the failure of the light source, or of the light sensitive element, or of any other vacuum tubes employed in the circuit will result in shutting off the power to the driving motor. Photoelectric device

(3) Where flammable vapors or dusts may be present all electrical installations shall be in accordance with the Canadian Electrical Code requirements for such locations. Flammable vapours, dusts

(4) Unless of the oil-immersed type, controller contacts carrying the main motor current shall be copper to carbon, except where the circuit is broken at two or more points simultaneously. (EC469/71) Controller contacts

51. (1) An emergency stop device shall be provided and Emergency stop

- (a) shall be within easy reach of the ascending and descending runs of the belt;
- (b) shall be so connected with the control lever or operating mechanism that it will cut off the power and apply the brake when pulled in the direction of travel; and
- (c) may consist of a cotton rope with a wire centre, manila or sisal rope, or may be made up of suitable lengths of metallic pipe or tubing.

Rope	(2) If rope is used, it shall be not less than 3/8" in diameter and wire rope, unless marlin-covered, shall not be used.
Use	(3) This stop device may be used for normal stopping and starting where the manlift does not run continuously. (EC469/71)
Factor of safety	52. All parts of the machine shall have a factor of safety of six based on a load of 200 pounds on each horizontal step on the "up" and "down" runs. NOTE: Any stress set up during acceleration or stopping are presumed to be taken care of in the above factor of safety. (EC469/71)
Instruction and warning signs	53. (1) Signs of conspicuous and easily read style giving instructions for the use of the manlift shall be posted at each landing or stenciled on the belt.
<i>Idem</i>	(2) Such signs shall be of letters not less than one inch in height and of a colour having high contrast with the surface on which it is stenciled or painted (white or yellow on black or black on white or gray).
Instructions	(3) The instructions shall read approximately as follows: "Face the Belt" "Use the Handhold" "To Stop - Pull Rope" (EC469/71)
Signs	54. (1) At the top floor (a) an illuminated sign shall be displayed bearing the following wording: "Top Floor - Get Off"; or (b) a red light of not less than forty watt rating may be provided immediately below the upper terminal landing and so located as to shine in a passenger's face.
Sign size	(2) This sign shall be block letters not less than two inches in height.
Sign location	(3) This sign shall be located within easy view of an ascending passenger and not more than two feet above the top terminal landing. (EC469/71)
Signs	55. (1) A conspicuous sign having the following legend; "Employees Only - Visitors Keep Off" shall be displayed at each landing.
Sign words	(2) The sign shall be of black letters not less than two inches in height and shall be of a colour offering high contrast with the background colour. (EC469/71)

OPERATING RULES

- 56.** (1) No freight of packaged goods shall be carried on any manlift. Carrying of materials and tools
- (2) No pipe, lumber, or other construction materials shall be handled on any manlift. No pipes, lumber, etc.
- (3) No tools except those which will fit entirely within a pocket in usual working clothes shall be carried on any manlift except as provided in subsection (4). Tools in pockets
- (4) Tools may be carried in a canvas bag having dimensions not larger than eleven inches by thirteen inches and supplied with carrying loops or handles, provided Tools in bag
- (a) such bag will have a leather bottom; and
- (b) such bag shall not have shoulder straps but shall be carried in the passenger's hand while he is riding the manlift. (EC469/71)
- 57.** A manlift with 200 pounds on each horizontal step of the "up" run shall show no appreciable slip of belt when Test for slipping
- (a) standing; or
- (b) running at rated speed. (EC469/71)
- 58.** (1) The manlift with 200 pounds on each horizontal step of the "down" run shall show no appreciable slip of the belt when *Idem*
- (a) standing; or
- (b) running at rated speed.
- (2) The brake shall stop and hold the belt with test load. (EC469/71) Brake with test load
- 59.** Each step shall be subject to a 400 pound proof load applied to the centre of the step with the machine stationary, and the guides shall not be displaced and there shall be no visible deformation or misalignment of the step or its support during the test. (EC469/71) Steps
- 60.** Each handhold shall support a load of 300 pounds with the machine stationary without appreciable deformation or injury to its fastenings. (EC469/71) Handholds
- 61.** The "up" final limit shall be tested by placing a weight of one hundred pounds on the approximate centre of the step or platform and running the machine in the "up" direction until the lift is stopped by the limit stop. (EC469/71) Stop devices
- 62.** The machine shall be stopped on both the "up" and "down" runs by means of the Emergency Stop. (EC469/71) Emergency stop

Speed	63. (1) Speed shall be taken and checked against specified (rated) speed (EC469/71)																				
Exceeding rated speed	(2) The speed shall not exceed the rated speed by more than ten per cent when running empty. NOTE: Speed may be taken by a revolution counter on the drive (head) pulley and the rpm multiplied by D, where D is the diameter in feet or may be taken with a tachometer with six inch or twelve inch circumference wheel running in contact with the belt. Readings taken with a six inch wheel circumference should be divided by two. (EC469/71)																				
Periodic inspection	64. All manlifts shall be inspected by a competent designated person at intervals of not more than thirty days. (EC469/71)																				
Items inspected	65. The periodic inspection shall cover but is not limited to the following items: <table border="0" style="margin-left: 40px;"> <tr> <td>Steps</td> <td>Warning signs and lights</td> </tr> <tr> <td>Step fastenings</td> <td>Signal equipment</td> </tr> <tr> <td>Rails</td> <td>Drive pulley</td> </tr> <tr> <td>Rail supports and fastenings</td> <td>Bottom (boot) pulley and clearance</td> </tr> <tr> <td>Rollers and slides</td> <td>Pulley supports</td> </tr> <tr> <td>Belt and belt tension</td> <td>Motor</td> </tr> <tr> <td>Handholds and fastenings</td> <td>Driving mechanism</td> </tr> <tr> <td>Floor landings</td> <td>Brake</td> </tr> <tr> <td>Lubrication</td> <td>Electrical switches</td> </tr> <tr> <td></td> <td>Guardrails</td> </tr> </table> (EC469/71)	Steps	Warning signs and lights	Step fastenings	Signal equipment	Rails	Drive pulley	Rail supports and fastenings	Bottom (boot) pulley and clearance	Rollers and slides	Pulley supports	Belt and belt tension	Motor	Handholds and fastenings	Driving mechanism	Floor landings	Brake	Lubrication	Electrical switches		Guardrails
Steps	Warning signs and lights																				
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Floor landings	Brake																				
Lubrication	Electrical switches																				
	Guardrails																				
Record	66. A written record shall be kept of findings at each inspection and shall be made available to duly qualified inspectors. (EC469/71)																				

**PART V
EXISTING INSTALLATIONS OF INCLINE LIFTS**

Application	67. This Part applies to existing installations of incline lifts. (EC469/71)
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GENERAL

Power equipment	68. (1) All transformer stations and other electrical equipment shall be protected so that no unauthorized person can enter the area or come in contact with any portion of the equipment or wiring.
Power overload	(2) All power equipment shall be protected against overloads by adequate circuit breakers or fuses.

(3) All exposed electrical transmission wiring shall be located so that in case of collapse or breakage of the line there shall be no possibility of contact between cars, cables, or passengers with the wires. (EC469/71)

Exposed
transmission wiring

69. (1) Each tower, terminal station, machine and wire rope of the J bar, T bar or platter pull must be properly grounded to dispose of lightning and static electricity.

Grounding

(2) During lightning storms and also where excessive static electricity is in evidence the lift shall be shut down as soon as possible. (EC469/71)

Lightning static
electricity

70. Adequate lighting shall be provided in machine rooms and stations and also throughout the entire area of the runway if the installation is to be operated at night. (EC469/71)

Lighting

71. A communication system, when required, shall conform to either of the following:

Communication
system

- (a) two-way telephone or radiophone, between all terminal and operating rooms;
- (b) two-way public address system capable of reaching all points along tow line; or
- (c) two-way push button signal (buzzer system) between operating room and terminal with a predetermined signal code. (EC469/71)

72. Fire extinguishers of an approved type shall be located in all terminal and intermediate stations of wood construction, in all power or transmission rooms, and in other places as may be directed by an inspector. (EC469/71)

Fire extinguishers

73. Provisions shall be made to render first aid to injured persons, and shall include provisions for transporting the injured persons off the lifts. (EC469/71)

First aid equipment

74. The tow path of each rope tow, J bar, T bar and platter pull shall be kept reasonably smooth and there shall be no obstruction within three feet of the centre line of the ski tracks. (EC469/71)

Clearance

75. (1) The dimensions of signs that shall be posted where required by these regulations shall be not less than given in the following table:

Signs

- | | | |
|--|-----------|----------------|
| (a) "No Admittance" | sign size | 2'6" x 10" |
| (b) "Tow Grippers Prohibited" | sign size | 2'6" x 12" |
| (c) "Remove Pole Straps from Wrists" | sign size | 2'6" x
1'6" |
| (d) "If Not Familiar With Use of Lift
Ask Attendant For Instructions" | sign size | 3'0" x
2'6" |
| (e) "Keep Ski Tips Up" | sign size | 2'6" x
1'0" |

	(f) “Prepare to Unload”	sign size	3’0” x 2’6”
	(g) “Safety Gate”	sign size	3’0” x 2’6”
	(h) “Emergency Signal”, “Phone” or “Stopping Devices”	sign size	1’0” x 2’0”
	(i) “Stop Lift Line Crossing”	sign size	3’0” x 2’0”
	(j) “Stay in Track”	sign size	2’6” x 1’0”
	(k) “Get Off Here”	sign size	2’0” x 10”
Sign words	(2) All letters shall be not less than four inches high except the sign indicated in clause (1)(i) where “Stop” shall be in letters six inches high and remainder in letters four inches high.		
Sign specifications	(3) All signs shall be in white block lettering on forest green background and shall be substantially supported. (EC469/71)		
Safety gates	76. (1) A safety gate shall be installed across the tow path and be located beyond the normal unloading point of each lift or tow, and each shall be marked with a red flag and a sign.		
Stopping	(2) Provisions for stopping the lift shall be readily accessible to the attendant at the loading and unloading stations.		
Closed circuit	(3) Every electrical circuit for safety gates and emergency stopping devices shall be a normally-closed circuit rather than normally-open circuit type so that, in case of power failure, the system will fail safely.		
Safety gates, etc.	(4) All safety gates and emergency stopping circuits shall be in series with one another and shall not be by-passed while lift is carrying passengers.		
Inspection after safety gate used	(5) After any actuation of a safety gate or an emergency stopping device, an inspection shall be made to determine and correct the cause before operation again commences. (EC469/71)		
Obligations of owners	77. The owner of every rope tow, J bar, T bar or platter pull shall (a) keep all moving parts of the installation properly lubricated according to manufacturer’s instructions; (b) provide protection for all safety devices against weather elements; (c) before commencing operation each day and after each major shutdown, have a qualified employee ride the tow or lift to examine all moving parts and safety devices to ensure that the rope tow, J bar, T bar or platter pull is safe to operate;		

(d) have a qualified person inspect at least once every seven operating days, all ropes, attachments, hangers, poles, bars, chairs, safety devices and other operating parts of the lifts, and this inspection shall include examination for abrasions, broken wires in ropes, slipping of wire rope attachments, drive, head and idler sheaves and their fastenings, including all supporting structures, foundations and anchorage; and

(e) maintain permanent records in the form of a daily log book, approved by the Chief Inspector, of all inspections, repairs, alterations, accidents, weather conditions and all other matters pertaining to the operation and maintenance of rope tows, J bars, T bars, and platter pulls, and these records shall be always available to the inspector. (EC469/71)

78. The owner of a lift shall not knowingly permit or instruct any person to do, or fail to do, anything which would endanger that person's or any other person's safety in or around a lift. (EC469/71) No dangerous instructions

79. No person shall ignore, or neglect to obey, all printed signs or verbal safety instructions given in an emergency by an owner, an attendant or other person authorized by the owner, or an inspector. (EC469/71) Instructions

80. All skiers shall wear proper safety straps between their skis and boots so as not to lose their skis while riding a chair lift or tow, or when they fall on the slope. (EC469/71) Safety straps

ROPE TOWS

81. While the rope tow is in operation, and where the entire length of the rope tow is visible from the loading area, there shall always be at least one engine operator, or attendant stationed at the machine. (EC469/71) Attendants

82. Where, because of the contour of the hill or weather conditions, the entire tow line is not visible to the engine operator or attendant, or where deemed necessary by an inspector, another attendant shall be stationed at the other end of the tow. (EC469/71) Additional attendants

83. In the case of two rope tows in parallel, (driven by the same power plant) one engine operator or attendant shall be sufficient for both ropes, provided he is stationed in a position where he has an unobstructed view of the entire length of both tow lines, and is not solely responsible for spacing skiers on both tows. (EC469/71) Parallel rope tows

84. (1) The provisions of section 83 shall not apply in the case of two ropes; one above and one below the power plant, located at a point on a slope from which the power plant can drive both ropes to advantage. Exception

Attendant for each rope	(2) There must be an attendant at the loading area for each rope and the rope must be visible to the attendant for its entire length. (EC469/71)
Stopping device	85. An emergency stopping device must be located within easy access of the engine man and attendants, so they can stop the lift in an emergency. (EC469/71)
Operator's position	86. The operator's position in the engine house must be readily accessible to an exit so that he may escape in case of a flash fire or other emergency. (EC469/71)
Brakes and emergency stopping device	87. The power unit or drive mechanism of a rope tow shall be designed so that the lift will stop upon application of a lockout type switch or safety stop gate located (a) in the power room; and (b) at each loading and unloading terminal, and transfer point.(EC469/71)
Manual stopping device	88. On rope tows more than 1200 feet in length and any shorter tow which may operate with a second attendant and where hill contour or weather conditions may limit visibility, a push button or other manually operated device which will cause the tow to stop, shall be available to the attendant at the top, intermediate and the bottom landings of the tow. (EC469/71)
Reverse prevention	89. No emergency stopping device shall disengage the clutch on the machine unless the drive pulley is equipped with a device which will prevent the tow rope travelling in reverse direction. (EC469/71)
Brakes	90. If the power plant is other than an internal combustion engine, then a brake must be automatically applied simultaneously with the driving power being shut off, unless an anti-rollback device is provided. (EC469/71)
Communication	91. (1) On rope tows, where the entire length of the tow line is not visible to the attendants, there shall be an established communication or signal system between the top landing and the engine man or attendant at the lower landing of the tow.
signal info posted	(2) The type of signals used in the communication system shall be posted and be properly understood between operator and attendant. (EC469/71)
Lubrication	92. All operating parts of the tow shall be kept properly lubricated. (EC469/71)

- 93.** The operator or a qualified person shall inspect the tow the first thing each day of operation to see that it is operating properly and that all safety devices are functioning properly. (EC469/71) Maintenance and inspection
- 94.** The loading area must be of sufficient length and width and have proper slope to permit easy approach to the rope. (EC469/71) Loading areas
- 95.** All idler sheaves at the loading and transfer areas must be adequately guarded. (EC469/71) Guards
- 96.** A flag or other method of marking and signs shall be provided at the loading area to regulate the safe spacing of skiers according to capacity and speed of the tow. (EC469/71) Safety
- 97.** The unloading area must be of sufficient area and graded to slope away from the tow. (EC469/71) Grading
- 98.** (1) Every machine room and machinery space shall be so located or enclosed, to a height of four feet or more above the adjacent floor or snow level, that unauthorized persons cannot have access thereto. Power and machine room area
- (2) Enclosures must be so located to provide a passageway of at least twenty-four inches in width around the machine or machinery to provide for maintenance and safe operation. Location of enclosures
- (3) Any openings in the enclosure must reject a ball two inches in diameter. (EC469/71) Opening in enclosure
- 99.** All exposed moving parts of the machinery shall be adequately guarded. (EC469/71) Guards
- 100.** (1) Where a rope tow is driven by an internal combustion engine which is located in a fully enclosed building, the exhaust from the engine must be carried to the outside of the building and discharged in a vertical direction on the opposite side from where persons normally approach the tow or ticket office as the case may be. Exhaust and ventilation
- (2) All connections in the exhaust pipe must be tight fitting to prevent leakage of fumes into the building. Tight connections
- (3) Provisions must be made for adequate ventilation of the building. Ventilation
- (4) Sufficient window area must be provided so the person in charge of the machine has an unobstructed view of the tow runway. Window area
- (5) There shall be one or more readily available exits in case of fire or other emergency. (EC469/71) Exits

Power units	101. Power units of portable tows shall be guarded by a snow fence or similar type of enclosure extending at least forty-eight inches above snow around machine. /EC469/71)
Fire extinguisher	102. (1) A suitable fire extinguisher shall be provided for each machine room.
Liquid fuels, etc.	(2) All liquid fuels and petroleum gases shall be stored and handled in accordance with the standards of the Canadian Underwriters' Association. (EC469/71)
Sign	103. There shall be a "NO ADMITTANCE" sign posted at entrance to machine room. (EC469/71)
Ropes	104. All rope for rope tows shall be manufactured for ski tow use, having special lay to minimize twist, and shall be reasonably free from outstanding fibres and broken strands. (EC469/71)
Splices	105. (1) Splices in new rope shall be made in accordance with the rope manufacturer's instructions which the owner shall keep on file.
<i>Idem</i>	(2) Splices in old rope shall be made as smooth as possible. (EC469/71)
Rope tension	106. (1) The tension on the rope shall be applied by a hand-operated chain hoist, a winch equipped with holding dogs, a self-locking type winch, or a block and tackle with holding dogs, or other approved devices.
Tension devices	(2) The tension devices shall be of good quality and <ul style="list-style-type: none"> (a) shall be securely fastened; (b) all cable hitches used for tension devices shall be protected by a thimble; and (c) all cable fastenings shall be held by at least two cable clips, spaced at least four inches apart and installed with the "U" of the clip on the dead end of the cable. (EC469/71)
Safety gate	107. (1) All rope tows shall be provided with a safety gate so located that no passenger in contact with, or being pulled by the tow rope, can come in contact with the transfer or head sheaves, machinery, building, or other obstruction.
Distance	(2) The distance from the safety gate to the first sheave or other obstruction shall not be less than 130 per cent of the distance the rope travels after the safety gate has been tripped, and this distance shall be determined while the tow is operating at maximum speed with only one passenger of average weight riding on the installation.

(3) The safety gate shall be installed across the tow path and marked with a red flag and be located at a point high enough above ski track so skier normally passes underneath without tripping the gate, or where skier may pass to one side of it, after releasing the tow rope. (EC469/71)

Safety gate

108. The uphill rope must not reach a height greater than six feet above the ground between loading and unloading areas. (EC469/71)

Rope height

109. (1) The idler sheaves for the return line of rope tows shall be located at a sufficient height and on the opposite side of post so that a passenger cannot become entangled in the sheaves or rope, except the return rope may be carried on sheaves suspended over the centre of the uphill track provided the rope is prevented from jumping out of the sheaves by guards, and is kept out of skiers reach.

Sheaves

(2) All hanging sheaves shall be suspended by steel cable, steel bars, welded link chain, or bolts with lock nuts.

Hanging sheaves

(3) All tail or terminal sheaves shall be securely anchored, and guarded to prevent sheaves from becoming displaced.

Tail, terminal sheaves

(4) There shall be a fence or guard surrounding the tail sheave and its tightening device.

Fence

(5) There shall be no intermediate sheaves on the uphill rope between the loading and transfer and unloading areas.

Intermediate sheaves

(6) A sheave may be installed so as to hold the uphill rope between two and three feet above the snow at loading area or rope tow, and such sheaves shall be adjustable for height and must be adequately guarded to prevent accidental contact and to prevent the rope being pulled out of the groove.

Installation of sheaves

(7) All idler sheaves adjacent to the tow rope at the loading area shall

- (a) be guarded by a fence to a safe point beyond the upper idler sheave adjacent to the tow rope; and
- (b) if skiers can approach the tow rope from the side where machine and idler pulleys are located, the unloading area must be guarded beyond the anchorage post used for mounting of the tension device. (EC469/71)

Idler sheaves

110. (1) Signs shall be posted where indicated as follows:

Signs to be posted

- (a) "No Admittance" at entrance to machine area;
- (b) "Tow Grippers Prohibited" at loading area;
- (c) "Remove Pole Straps from Wrist" at loading area;
- (d) "Safety Gate" at unloading and transfer points;
- (e) "Get Off Here" at unloading and transfer points;

	(f) "Stay in Ski Track" at loading area;
	(g) "Spacing of Skier Regulated by Red Flag" at loading area.
	NOTE: For dimension of lettering and size of sign see section 75.
Instructional sign	(2) The following instructions may be on one large sign with all letters four inches high: <ul style="list-style-type: none"> (a) "Tow Grippers Prohibited"; (b) "Remove Pole Straps from Wrists"; (c) "Stay in Ski Track"; (d) "Spacing of Skier Regulated by Red Flag";
<i>Idem</i>	(3) The following shall be on separate signs: <ul style="list-style-type: none"> (a) "Get Off Here"; and (b) "Safety Gate". (EC469/71)
Speed	111. (1) Maximum speed of the tow rope shall not exceed 1320 FPM or 15 MPH.
Speed control device	(2) The throttle or other speed control device shall be under the control of the operator or attendant or under control of a mechanical governor.
Controlling speed	(3) If the installation provides for a variation of speed, the speed shall be controlled by the attendant or engine operator. (EC469/71)
Tow path	112. The tow path shall be kept reasonably smooth and there must be no obstruction within three feet of the centre line of the ski track. (EC469/71)
Tower posts	113. (1) All posts and terminal structures of a rope tow shall be secured against overturning under the most severe loading conditions.
Foundations	(2) Foundations for any posts or structures shall extend below frost line, if resting on rock they shall be firmly anchored to the rock, or be rock ballasted.
Guy wires, braces	(3) When guy wires or braces are used, they must be clearly marked and located more than three feet from the tow line.
Padding sharp or protruding objects	(4) Any tower or structures located in the immediate area of any travelled portion of the lifts shall not have any sharp or protruding objects at a height of less than eight feet above snow level, unless adequately padded.
Trees	(5) Suitably sized living trees may be used for head sheave and return rope sheave supports. (EC469/71)
Tow grippers	114. No person shall use tow grippers. (EC469/71)

J BARS, T BARS AND PLATTER PULLS

- 115.** Sections 116 to 141 inclusive shall apply only to J bars, T bars and platter pulls. (EC469/71) Application
- 116.** (1) During the operation of the J bar, T bar or platter pull, an attendant shall be on duty at all loading areas and unloading terminals, except where not deemed necessary by an inspector. Attendants
- (2) If deemed necessary by an inspector, an attendant shall be posted at an intermediate station which is not visible to either the lower or upper attendant. (EC469/71) Intermediate station attendant
- 117.** (1) Every electrical power unit of a J bar, T bar and platter pull shall be equipped with an electric brake which shall apply automatically when power is cut off by a stopping device or for any other reason, or a manually operated brake approved by an inspector. Brakes and stops
- (2) The brake shall have sufficient capacity to stop the lift and hold the maximum load in the event of power failure. Brakes
- (3) The electric brake shall not be permanently connected across the armature field of a direct-current driving motor. (EC469/71) Connecting across motor
- 118.** (1) The power unit or drive mechanism of the lift shall be designed so that the lift will stop upon application of a lock-out type switch in the machine room, or a safety gate located at each loading and unloading terminal. Stop switch
- (2) There shall be a positive backstop or backup ratchet to automatically prevent reverse rotation of a lift. (EC469/71) Prevention of reverse rotation
- 119.** Communications systems shall be provided and conform to clause 71(a) or (b). (EC469/71) Communications
- 120.** (1) All hauling wire rope attachments shall be of a type which has been proven to give satisfactory service or, if of a new design, it must be approved by the Electrical and Elevator Inspection Division of the Department of Community and Cultural Affairs. Bars and attachments
- (2) All stationary wire rope attachments and hangers on the hauling rope must be relocated at least once in every twelve months, and Stationary attachments hangers
- (a) the attachments must be moved a distance of at least three feet ahead for each relocation; and
- (b) the manufacturer's or designer's instructions must be followed if they require that the attachments be moved more frequently than once a year.

Skis on tow path	(3) The cable tension and length of bars and attachments of J bars, T bars, and platter pulls shall provide for the passenger's skis to be always on the tow path. (EC469/71; 283/80; 87/84; 639/93)
Passenger release	121. (1) All bars or other devices to support passengers shall be designed so that the passenger may free himself readily.
Person not fastened to tow	(2) The use of straps or other similar facilities to fasten a person to the towing attachment is prohibited. (EC469/71)
Spacing	122. (1) The spacing of hauling bars shall be determined by the length of the retractable cable or bar, but in no case shall the interval between bars be less than four seconds when the lift is operated at maximum speed.
Retraction of towing device	(2) Retraction of the bars or towing devices shall be so controlled that a properly released bar may be released from an extended position without causing injury to itself or the passenger, or causing violent oscillation.
Retraction failure	(3) Retractable towing devices shall be immediately removed from use when they fail to retract normally. (EC469/71)
Bullwheels and sheaves	123. Replacement drive wheels, bullwheels, idler sheaves and deflector sheaves, shall be at least equal to, or better than, the specification of the designer or manufacturer of the equipment being replaced. (EC469/71)
Guards	124. (1) Guide sheaves or guards must be provided to guide the hauling rope on and off the bullwheels.
Floating bull wheels	(2) Where floating bullwheels are used, there must be a guard to catch the cable in the event it comes off the wheel. (EC469/71)
Cable guards	125. (1) There shall be guards or other devices to prevent the cable from coming off the sheaves on the tower side of all towers and to prevent the cable from coming off the outside of all supporting towers.
Towers	(2) All towers shall be equipped with a device or devices to automatically stop the lift when the cable leaves the sheaves on any tower.
Cable catchers	(3) Concave shaped brackets or other devices shall be provided to catch the cable in the event it comes off the hold-down sheave. (EC469/71)
Return cable	126. The sheaves for the return cable shall be installed in a manner to prevent the passengers from contacting the sheaves and cable, or being struck by a bar or a J bar, T bar or platter pull. (EC469/71)

- 127.** All hanging sheaves shall be suspended by steel cable, steel bars, or bolts with lock nuts. (EC469/71) Hanging sheaves
- 128.** For purpose of design, and computing capacity, each passenger shall be considered as having a weight of 180 pounds. (EC469/71) Capacity and speed
- 129.** Incline lifts shall run in a straight line, in plan, between the terminals and any tow paths, and when involving lines with angles shall require special consideration and approval in respect to capacity and speed. (EC469/71) Straight lines, angles
- 130.** The throttle shall be constantly under the control of an operator or a mechanical governor. (EC469/71) Governor
- 131.** If the installation requires a variation of speed, the speed shall be controlled by the attendant or an engine operator. (EC469/71) Variation of speed
- 132.** At no time shall the lift be loaded in excess of its rated capacity and as designated on the certificate of inspection. (EC469/71) Loading
- 133.** The prime mover and machine area shall be enclosed to prevent unauthorized persons having access thereto. (EC469/71) Power and machine area
- 134.** (1) A copy of the manufacturer's specifications for any new replacement wire rope must be submitted to the Chief Inspector. Ropes
- (2) These specifications shall include size, grade of steel, construction, core and ultimate breaking strength. Specifications
- (3) Before the cable is delivered, a destruction test must be made by the manufacturer or a competent laboratory and a certified copy of the results filed with the Chief Inspector. Destruction test
- (4) A weather-proof tag bearing this information shall be attached to all new cables at the bottom hitch or adjacent thereto. (EC469/71) Weather-proof tag
- 135.** (1) The incline lift design shall provide for the hauling rope to be under constant tension by means of a freely moving counterweight. Counterweights
- (2) Counterweight ropes shall have a factor of safety of not less than six when new, and splicing of counterweight ropes shall not be permitted. (EC469/71) Safety factor of counter weights
- 136.** (1) Splicing of hauling wire ropes shall be done in accordance with the specifications of the manufacturer of the rope. Splicing
- (2) Splicing must be done by, or under the supervision of, a qualified person. Qualified splices

Lubrication of hauling ropes	(3) Hauling ropes shall be lubricated to protect them against weather elements.
Off ground	(4) The hauling rope shall not be left lying on the ground for an unnecessary period.
Replacement	(5) The hauling rope shall be replaced when <ul style="list-style-type: none"> (a) thirty per cent or more wires are broken in one strand of rope; (b) fifteen per cent of the wires are broken plus excessive corrosion, rust, or wear; (c) the cable has been mechanically damaged; or (d) any section collapses due to internal breakdown. (EC469/71)
Safety stops and gates	137. (1) A safety gate shall be provided at all terminals to stop the lift before a passenger comes in contact with the driving mechanism or any obstruction, or is carried around the top sheave, and the safety gate shall be marked with a red flag and a sign.
Distance from safety gate	(2) The distance from this safety gate to the first obstruction shall not be less than 130 per cent of the distance the hauling rope travels after the safety gate has been tripped or actuated.
Accessible stopping device	(3) Provision for stopping the lift shall be readily accessible to the attendant at the loading and unloading station. (EC469/71)
Terminals and stations	138. (1) Loading areas shall be of sufficient length and of proper grade so as to allow the skiers an easy start and to provide a constant tension on the hauling rope.
Unloading areas	(2) Unloading areas shall be at least sixteen feet long and approximately level but must be declined sufficiently to enable the passenger to ski away from the lift.
Guides, guards	(3) Guides or guards shall be provided at all terminals of J bars, T bars and platter pulls to guide the hauling bars around the bullwheels without undue bouncing.
Fencing	(4) The area around bullwheels and counterweights shall be fenced to prevent entrance by the public. (EC469/71)
Towers	139. (1) All towers and other supporting structures shall be properly located to conform to the profile of the terrain and shall be so constructed and maintained to provide for proper deflection of the hauling rope.
Foundations	(2) Foundations for towers shall be concrete and extend below the frost line or be adequately anchored, or rock ballasted if located on rock.

(3) Both foundations and towers shall be designed against overturn under maximum conditions of loading and wind force. Designed against overturn

(4) Towers shall have adequate provision to facilitate inspection of sheaves. Inspection

(5) Each tower shall be conspicuously designated and numbered consecutively. Designation, numbers

(6) Where creep snow occurs, adequate snow breakers or shears shall be installed to protect towers and equipment with an active back or an angle of not less than thirty degrees to the direction of snow creepage. Snow creepage

(7) A guard shall be provided on the tower side of all carrier assemblies which will prevent the hauling ropes from coming off that side of the carrier assembly. Guard

(8) All towers shall be equipped with a device to prevent the bars from swinging into or catching in the towers. Bar not to swing in tower

(9) Towers or other supporting structures shall have the sheaves so located as to prevent the towing rope from coming closer than two feet above the passenger's head under regular loading conditions. (EC469/71) Height of tow rope

140. The tow path shall be kept reasonably smooth and there must be no construction within three feet of the centre line of the ski track. (EC469/71) Tow path

141. The following signs shall be posted as indicated: Signs to be posted

- (a) "No Admittance" at entrance to machine area;
- (b) "If Not Familiar With Use of Lift, Ask Attendant for Instruction" at loading area;
- (c) "Safety Gate" wherever such devices are located;
- (d) "Emergency Stopping Device" wherever such devices are located; and
- (e) "Stay in Track" approximately 100 feet ahead of loading areas. (EC469/71)

PART VI EXISTING INSTALLATIONS OF PASSENGER AND FREIGHT ELECTRIC ELEVATORS

142. This Part applies to existing installations of passenger and freight electric elevators. (EC469/71) Application

Hoistways	143. (1) Every elevator hoistway shall be fully enclosed with an unperforated material to a height of six feet or more above each floor level or landing, except at the landing openings.
Open work enclosures	(2) Openwork enclosures may be used above the six foot level on sides not used for loading and unloading, provided any opening in the openwork enclosure rejects a ball one inch in diameter, except any part of the enclosure within four inches of the counterweight runway shall be solid.
Construction	(3) Openwork enclosures may be constructed of <ul style="list-style-type: none"> (a) steel wire grille or expanded metal which shall be at least No. 13 U.S. wire gauge; or (b) wood slats, which shall be mounted vertically and at least one inch nominal thickness.
Height of landing opening	(4) The height of a landing opening shall not exceed the height from the car floor to the top of the car enclosure, or the underside of the crosshead if there is no top, nor shall its width exceed that of the corresponding car opening. (EC469/71)
Projections	144. (1) Projections extending inwardly from the hoistway enclosure, except interlocks and other similar operative devices, which are within four inches of an entrance side of an elevator car shall be bevelled and substantially guarded on the underside by smooth concrete, or by smooth metal or wood plates, set at an angle of not less than sixty degrees, nor more than seventy-five degrees from the horizontal.
Levelling, inching device	(2) If the car is equipped with a levelling or inching device, the concrete or plates at each landing shall extend vertically the height of the levelling or inching zone, and may continue vertically downward, but the bottom edges shall be bevelled and guarded as required in subsection (1). (EC469/71)
Hoistway enclosures	145. No hoistway enclosure on the sides used for loading or unloading shall be more than five inches from the edge of the car platform, except <ul style="list-style-type: none"> (a) where the hoistway doors are installed wholly within the hoistway, then it shall not be more than 7 inches; or (b) where the elevator car is equipped on that side with a door, or gate, having an interlocking device. (EC469/71)
Installations in hoistway	146. No person shall hereafter install any electrical conductor, or any piping to convey air, gases, or liquids through or in a hoistway except <ul style="list-style-type: none"> (a) electrical conductors and air-lines for the elevator; (b) piping in the pit for a hydraulic elevator; and (c) low pressure steam, or hot water pipes for heating and sprinkler piping for protecting the hoistway. (EC469/71)

147. (1) The minimum clearance between a side of a car and a hoistway enclosure shall be inches and the clearance between the car and counterweight shall be one inch. Clearances

(2) The minimum clearance between a car platform and a landing sill shall be at least inch for an elevator car having a side-post construction and inch for an elevator car having corner-post construction. Clearance

(3) The maximum clearance between a car platform and a landing sill shall be 1 inches. (EC469/71) *Idem*

148. (1) Safe and convenient access to a machine room and overhead machines shall be provided by a stair with handrails, or a fixed ladder not located in the hoistway. Penthouses and machine rooms

(2) Every machine room and machinery space shall be enclosed to a height of six or more feet so that unauthorized persons cannot have access thereto. Enclosed

(3) Every machine room and machinery space shall be enclosed and guarded from adjacent portions of the hoistway. *Idem*

(4) Every machine room and machinery space shall be lighted artificially to a minimum intensity of ten foot-candles.(EC469/71) lighting

149. All elevator machinery shall be supported so as not to endanger the safety of persons in or adjacent to the elevator and to prevent any part of the elevator from becoming displaced. (EC469/71) Machine support

150. The factors of safety, safe working stresses and allowable deflections of overhead beams and their supports to be used when computing the maximum capacity of the elevator shall be to the satisfaction of the Chief Inspector. (EC469/71) Factors of safety

151. (1) Every elevator shall have a pit which, when five or more feet in depth, shall be provided with an access ladder of steel construction so located as to be easily accessible from the bottom landing opening and shall run from the pit floor to a height of not less than four feet above the sill of the bottom landing opening. Pits

(2) Where structurally possible a clearance of twenty-four or more inches between the underside of a car platform and the floor of the pit vertically below it shall be provided when the car has fully compressed its buffers, or is resting on its bumpers. (EC469/71) Clearance

152. Every pit shall be provided with an emergency stop switch located on the side of the hoistway not more than five feet above the pit floor. (EC469/71) Stop switch

Spring buffers Solid buffers	<p>153. (1) Suitable spring buffers shall be provided for the car and counterweight in the bottom of every pit.</p> <p>(2) If space limitations prevent the installation of spring buffers and the speed of the elevator does not exceed fifty FPM, solid buffers may be provided. (EC469/71)</p>
Pit access door	<p>154. (1) Where a separate pit access door is provided, it shall be self-closing and provided with a spring type lock arranged to permit the door to be opened from inside without a key.</p>
Prevent operation when door open	<p>(2) Where a separate pit access door is provided, and where the lowest structural or mechanical part, equipment or device installed beneath the car platform, except guide shoes or rollers, or safety jaw assemblies, projects below the top of the access door opening when the car is level with the bottom landing, an electric contact shall be provided to prevent operation of the elevator when the door is open. (EC469/71)</p>
Cleanliness	<p>155. Every pit shall be kept clean and reasonably dry. (EC469/71)</p>
Guard	<p>156. (1) A solid metal or perforated guard shall be provided in a pit, on the open side of the space between counterweight guides, and the guard shall extend from twelve inches above the pit floor to a height of seven or more feet.</p>
Exception	<p>(2) The guard required by subsection (1) may be omitted on the side facing the elevator car which the counterweight serves if compensating chains or ropes are attached to the underside of such counterweight.</p>
Perforated guards	<p>(3) Perforated guards, if provided, shall reject a ball one inch in diameter. (EC469/71)</p>
Car clearances overhead	<p>157. (1) A clearance of two or more feet between the crosshead, or from the top of the car if there is no crosshead, and the bottom of any part of the hoistway, or elevator machinery vertically above it, shall be provided</p> <ul style="list-style-type: none"> (a) on a traction elevator when the counterweight has fully compressed the counterweight buffer; (b) on a winding-drum elevator when the car has been stopped by the top final terminal stopping device; or (c) on a hydraulic plunger elevator equipped with a ring or similar device when the plunger is in its fully extended position.
Exception	<p>(2) The clearance required by subsection (1) may be omitted where a manually-operated disconnecting switch, conveniently located on top of the car, will prevent operation of the elevator by any person not on top of the car. (EC469/71)</p>

158. Every elevator shall have a clearance between the top of the counterweight and the bottom of any part of the hoistway, or elevator machinery, vertically above it, when the car is stopped at the lowest point to which it can safely travel. (EC469/71)

Counterweight
clearances overhead

159. (1) Every elevator shall have an externally-operated multiple disconnecting switch for the conductors supplying current to it and such switch shall be properly designated.

Disconnecting
switch

(2) The disconnecting switch shall be readily available and visible from the elevator machine, or motor-generator set, and provision made to lock the switch in its open position. (EC469/71)

Idem

160. No passageway or habitable space shall be under an elevator hoistway or pit, unless the Chief Inspector is satisfied that provision has been made to prevent injury to a person in the passageway or habitable space, through normal or abnormal operations of the elevator car or its counterweight. (EC469/71)

Passage under
hoistway

161. (1) Every hoistway opening of a passenger elevator shall be guarded by a door extending from the door sill to the top of the opening.

Hoistway doors for
passenger elevators

(2) The minimum head room clearance of a hoistway opening shall be six feet six inches unless structural conditions prevent such clearance.

Clearance

(3) Every hoistway door or gate of a passenger elevator shall be solid, or may have openings which will reject a ball one inch in diameter. (EC469/71)

Doors

162. The distance between the hoistway side of a landing door or gate and the hoistway edge of the landing sill shall be six inches, or less, for every passenger elevator which can be operated only from the car, but shall be four inches, or less, if the elevator can be operated from the car and a landing. (EC469/71)

Distances

163. Every hoistway door or gate for a passenger elevator shall be provided with an interlocking device which shall prevent the car from moving away from the landing until such hoistway door or gate is closed and locked, and which shall prevent such hoistway door from being opened from the landing side unless the car is in the landing zone. (EC469/71)

Locking devices

164. (1) Every landing sill for an elevator shall be maintained to prevent a person tripping or slipping thereon.

Landing sills

(2) The distance between the hoistway side of a door or gate and the hoistway edge of the landing sill shall be six inches or less for every

Distance between
door or gate and
landing sills

freight elevator which can be operated only from the car, but shall be four inches or less, if the elevator can be operated from the car and a landing. (EC469/71)

Hoistway doors	165. (1) Every hoistway opening of a freight elevator shall be guarded by a wood or metal door or gate.
Distances	(2) The distance between the hoistway side of a door or gate and the hoistway edge of the landing sill shall be six inches or less for every freight elevator which can be operated only from the car, but shall be four inches or less, if the elevator can be operated from the car and a landing. (EC469/71)
Landing gates	166. Every landing door or gate hereafter installed on a freight elevator shall be vertically sliding and not collapsible except at a landing where insufficient head room, or a structural condition, makes the installation or use of such gate impracticable, in which case the Chief Inspector may permit <ul style="list-style-type: none"> (a) a one-piece horizontally swinging, or sliding door or gate; (b) a vertical collapsible gate; (c) a horizontal collapsible gate; or (d) double-swing doors. (EC469/71)
Closed landing gate	167. (1) A landing gate in the closed position shall extend downwardly from a height of not less than sixty-six inches to the landing sill, unless lack of head room at the bottom landing opening makes such protection impracticable, in which case a gate may extend downwardly to a point not higher than eighteen inches above the landing sill.
Clearance	(2) The minimum head room clearance of an open hoistway gate or hoistway door shall be six feet, six inches unless structural conditions prevent such clearance. (EC469/71)
Openings	168. An opening in a landing door or gate shall reject a ball two inches in diameter except that <ul style="list-style-type: none"> (a) a collapsible gate may have openings which will reject a ball 4 inches in diameter; or (b) a hand-rope opening which is not more than five inches wide by thirty-six inches high and with its bottom approximately thirty inches above the landing floor. (EC469/71)
Vision panels	169. Every hoistway landing door for a freight elevator which can be operated from outside the hoistway shall be provided with a vision panel of clear-wired glass, not over six inches wide and eighty square inches in area, unless the hoistway door automatically opens when the car is at the landing. (EC469/71)

- 170.** A landing door or gate shall withstand a force of seventy-five pounds applied perpendicularly to it at any point, without causing permanent damage to the door or its mechanism. (EC469/71) Strength
- 171.** Every freight elevator hoistway landing door or gate shall be provided with an interlocking device which shall prevent the car from moving until such door or gate is closed and which shall prevent such door or gate from being opened from the landing side, unless the car is within the landing zone. (EC469/71) Locking device
- 172.** Every guide rail shall be rigidly fixed and supported in proper alignment to safely withstand the loads likely to be imposed upon it by a car or counterweight. (EC469/71) Guides
- 173.** Every counterweight of an elevator shall have guide rails of metal or wood. (EC469/71) Counterweights
- 174.** (1) The sides of a passenger elevator car shall be enclosed with solid or perforated materials to a height of six feet above the car floor, except at an entrance opening, provided that
- (a) any part of the car side that is within four inches of a counterweight runway shall be solid;
 - (b) sides shall reject a ball two inches in diameter; and
 - (c) any sides hereafter installed shall be solid or reject a ball inch in diameter.
- (2) The car enclosure shall be metal, wood or other suitable material capable of safely withstanding any load to which it may likely be subjected. (EC469/71) Car enclosures for passenger elevators
- 175.** (1) Subject to subsection (2), every passenger elevator car shall have an unperforated top. Unperforated top
- (2) An unperforated and removable panel for emergency exit may be installed in the top. (EC469/71) Emergency exit
- 176.** (1) The entrance to a passenger elevator car shall have a door or gate extending the full width of the entrance opening and to a height of six or more feet. Entrance
- (2) A car door or gate shall provide a minimum head room clearance of six feet, six inches unless structural conditions prevent such clearance. Clearance
- (a) a collapsible gate may have openings which reject a ball 3 inches in diameter; and
 - (b) every other type of door or gate hereafter installed shall be solid or have openings which will reject a ball inch in diameter. (EC469/71)

Operation	177. Every car door or gate of a passenger elevator shall be equipped with a door or gate electric contact to prevent operation of the car unless the door or gate is either fully closed or within two inches of being fully closed. (EC469/71)
Car enclosures for freight elevators	178. (1) The side of a freight elevator car shall be enclosed to a height of six inches above the car floor, except at an entrance opening, with solid or perforated materials, provided that <ul style="list-style-type: none"> (a) any part of the car side that is within four inches of a counterweight runway shall be solid; (b) openings in sides will reject a ball two inches in diameter; and (c) any sides hereafter installed shall be solid or reject a ball inch in diameter.
Enclosure material	(2) The car enclosure shall be metal, wood or other suitable material capable of safely withstanding any load to which it may likely be subjected. (EC469/71)
Top for freight elevator	179. (1) Every car for a freight elevator, except when its travel does not exceed fifteen feet, shall be fully covered by a substantial top which shall be securely fastened, except a portion adjacent to a car entrance which may be hinged.
Car top	(2) Every car top for a freight elevator shall be either solid or perforated, and if perforated, the openings shall reject a ball one inch in diameter, and every car top shall be capable of safely supporting a concentrated load of 150 pounds. (EC469/71)
Entrances	180. (1) A door or gate shall be provided at each entrance to the car, where practicable, or the entire hoistway facing the car entrances be sheathed with a substantial, smooth material, including proper toe guards where required, to the satisfaction of the Chief Inspector, and the maximum clearance between the car platform and the hoistway shall be 1 inches.
Car door or gate	(2) A car door or gate shall guard the entire width of the entrance opening to a height of at least five feet six inches above the car floor and any opening in a closed gate shall be as specified in section 168.
Clearance	(3) A car door or gate shall provide a minimum head room clearance of six feet, six inches unless structural conditions prevent such clearance.
Electric contact	(4) A car door or gate shall have a door or gate electric contact. (EC469/71)
Equipment prohibited	181. Equipment prohibited inside cars shall be as required by clause 3.6.1.9. of the Code. (EC469/71)

182. Every elevator, except a plunger hydraulic elevator, shall have a car safety. (EC469/71) Car safety

183. (1) Every passenger elevator, except a plunger hydraulic elevator, shall have a car safety actuated by an overspeed governor. Governors

(2) Overspeed governors shall be set to trip at the speeds indicated in the following table: Speed trips

Rated Speed	Maximum Trip Speed	Max. Speed at Which Gov. Switch Operates
0-150**	185	185*
150	210	210*
175	250	250*
200	280	280*
225	308	277
250	337	303
300	395	355
350	452	407
400	510	459
450	568	512
500	625	563
600	740	703

* Governor Overspeed Switch Not Required

** When Used With Type A Safeties. (EC469/71)

184. The governor rope of every elevator shall be replaced by a new rope equal in size, material and construction, when it shows any sign of becoming unsafe for use. (EC469/71) Governor rope

185. (1) No friction gearing or clutch mechanism shall be used to connect the drum or sheave of an elevator to the main driving gear. Machines

(2) Every power elevator, except a hydraulic elevator, shall be equipped with an electric brake which, when applied, shall be capable of stopping and supporting the car and its maximum capacity. (EC469/71) Electric brake

186. (1) Every hydraulic elevator shall have a device which will prevent a car from moving away from the landing due to leakage of liquid or gas under pressure in the machine, unless every hoistway door is arranged to close automatically if the car leaves a landing. Hydraulic elevators

(2) Every cylinder of a hydraulic elevator shall be provided with means to vent air or other gas. Air, gas vents

Relief valve	(3) Every pump connected to a pressure tank of a hydraulic elevator shall be equipped with a relief valve capable of safely passing the full discharge of the pump and so installed that it cannot be made inoperative, and the discharge from such valve shall be into a discharge tank or to the intake of such pump.
Pump	(4) Every pump of a hydraulic elevator shall be equipped with a device to automatically cut off the motive power to such pump at a safe maximum pressure unless the pump is equipped with a relief valve fulfilling the requirements of subsection (3).
Pressure gauge	(5) A pressure gauge fitting identified as reading line pressure shall be provided on the pressure side of the system in close proximity to the pumping unit. (EC469/71)
Pressure tanks	<p>187. (1) Every pressure tank of a hydraulic elevator shall</p> <ul style="list-style-type: none"> (a) be so located and supported that its interior and exterior may be inspected; (b) have a water-gauge glass attached directly to it so as to show the level of the liquid when the tank is more than half-filled; (c) have a pressure gauge directly attached to it which shall indicate pressures up to one and a half times the normal working pressure in the tank; (d) have a connection for an inspector's gauge; and (e) if likely to be subjected to pressure below atmospheric, be provided with one or more vacuum relief valves.
Compliance with Act	(2) Every pressure tank hereafter installed for a hydraulic elevator shall be designed to comply with the <i>Boilers and Pressure Vessels Act</i> R.S.P.E.I. 1988, Cap. B-5 and regulations and any amendments made thereto. (EC469/71)
Open vent pipe	188. Every tank of a hydraulic elevator not subject to pressure above atmospheric in normal operation shall have an open vent pipe without valve therein and the pipe shall discharge to a safe location. (EC469/71)
Safety devices	<p>189. (1) Every electric elevator shall be equipped with the following devices:</p> <ul style="list-style-type: none"> (a) an electric brake; (b) a reverse phase and phase failure delay on drum machines; (c) a potential switch; (d) an electric slack rope switch on drum machines; (e) a stop motion switch on drum machines; (f) v-belt drive or directly driven machine; and (g) motor overload protective devices.

Every elevator shall have normal terminal stopping devices which will stop the car at its top and bottom landings.

(3) Hand rope type of control may be used if the devices in subsection (1) are installed and Hand rope control

(a) any opening in the entrance gates, hoistway or car enclosures, for the operation of the hand rope, is not larger than five inches wide by thirty-six inches high, and with the bottom approximately thirty inches above the floor; and

(b) a person is not required to reach across or through any part of the car enclosure to operate the hand rope from outside the hoistway. (EC469/71)

190. (1) Every elevator shall have a final terminal stopping device to prevent the car from overrunning its safe limits of travel. Terminal stopping device

(2) A final terminal stopping device of an electric elevator Final terminal stopping device

(a) operated by a hand-rope or similar device shall prevent such operating device from causing the car or counterweight to continue in the same direction as when the final terminal stopping device was engaged; or

(b) not operated by a hand-rope or similar device, shall prevent the operating device from causing the car or the counterweight to move in either direction.

(3) The operation of the final terminal stopping device of an elevator shall cause the brake on the machine to automatically apply. Idem

(4) Such terminal stopping device shall Type of device

(a) be of the multipole type; and

(b) not control the same switches on the controller as the normal terminal stopping device unless two or more separate and independent switches are provided, two of which shall be closed to complete the motor and brake circuit in each direction of travel.

(5) An elevator provided with a winding drum machine shall be provided with a final stopping device (stop motion switch), which shall Idem

(a) automatically open the main current supply circuit to the elevator motor; and

(b) automatically apply the electric brake. (EC469/71)

191. Every winding drum elevator having a poly-phase motor shall be provided with a device which prevents operating the motor when Safety devices special cases

(a) the phase rotation is in the wrong direction; or

(b) there is failure in any phase. (EC469/71)

Current damage	192. Every elevator motor shall be so protected that when there is excessive current due to single-phase operation from a mechanical cause, the current to the motor is cut off before the windings are damaged. (EC469/71)
Limit	193. No elevator having a winding drum machine shall have a terminal limit device driven by a chain, rope or belt from the machine. (EC469/71)
Power cut off	194. Every elevator having a winding drum machine shall be provided with a device to cut off the power to the machine and automatically apply the brake regardless of the position of the car in the hoistway when any hoisting rope becomes slack or breaks, and the power shall remain cut off until the device is manually reset. (EC469/71)
No overrun of safe limits	195. Every hydraulic elevator shall be so constructed that the elevator car will be prevented from overrunning its safe limits of travel independently of the operating device. (EC469/71)
Operating device	196. (1) If an operating device of an electric elevator has a handle, then the handle shall automatically return to the “stop” position when the hand of the operator is removed from the handle.
More than 100 ft/min	(2) No elevator shall have an operating device requiring a hand rope, cable or rod, if the speed of the car exceeds one hundred feet per minute. (EC469/71)
Ropes	197. Every elevator car, except that of a plunger hydraulic elevator and every counterweight shall be hoisted by steel or iron wire rope or ropes without any covering, except where the hazard of excessive corrosion or any other hazard exists, in which case the Chief Inspector may permit the use of a wire rope covered with marlin or other material. (EC469/71)
Inspection of ropes	198. (1) The inspection of ropes is determined by the number of broken wires in a rope lay and/or loss of rope diameter.
Rope lay	(2) A rope lay is one complete turn of a rope strand around the rope core.
Rope length	(3) In rope length a rope is approximately 3 1/4” for 1/2” rope, 3 5/8” for 9/16” rope, 4 1/16” for 5/8” rope, 4 1/2” for 11/16” rope, and 4 7/8” for 3/4” rope.
Replacement	(4) Hoisting and counterweight ropes shall be replaced when conditions are equal to or in excess of these given in the following tables:

DISTRIBUTED BREAKS IN A ROPE LAY

Drum Machines	Traction Machines	
12 breaks any rope	24 breaks	(6 x 19)
		(6 x 21) ropes (6 x 25)
	32 breaks	(8 x 19)
		(8 x 21) ropes
		(8 x 25)

UNEQUAL OR BROKEN WIRES IN ONE OR TWO STRANDS IN
A ROPE LAY

Drum Machines	Traction Machines	
8 breaks any rope	8 breaks	(6 x 19)
		(6 x 21) ropes (6 x 25)
	10 breaks	(8 x 19)
		(8 x 21) ropes
		(8 x 25)

LOSS OF ROPE DIAMETER

Size of Rope	Loss of Diameter
1/2"	1/32"
9/16"	1/32"
5/8"	3/64"
11/16"	3/64"
3/4"	3/64"
1"	1/16"

(EC469/71)

CORROSION -(RUST - RED DUST - ROUGE)

For corrosion replace ropes when broken wires exceed fifty per cent of the above values.

199. The factor of safety to be used when determining the maximum safe capacity of a wire rope shall be equal to, or greater than, that shown in table 15 of the Code. (EC469/71) Wire rope

200. A rope, chain or belt for an elevator car, counterweight, or governor shall not be spliced. (EC469/71) No splicing

201. (1) When either the car, or the counterweight rope of an elevator, having a winding-drum machine, is extended to the extreme limits of travel, one or more turns of such rope shall remain on the drum. Rope for winding-drum machines

Rope fastening	(2) Where a rope is fastened inside a winding-drum, the rope shall pass around the drum shaft before being fastened, or be fastened to a clevis passing around the shaft if the drum revolves in a direction opposite to the shaft. (EC469/71)
Hoisting ropes	202. Every hoisting rope for a car or counterweight shall be securely and individually fastened at each end by babbitt-fitted sockets, or by <ul style="list-style-type: none"> (a) two clips for ropes not over 3/8" in diameter; (b) three clips for ropes over 3/8" and not over 5/8" in diameter; (c) four clips for ropes over 5/8" in diameter. (EC469/71)
Tags	203. (1) Every person hereafter installing a hoisting, counterweight, or governor-rope shall provide a metal or plastic tag legibly showing the date of installation, the grade of material, diameter, ultimate strength, and notice if the rope is "preformed".
Tag	(2) The tag shall be attached to the rope at the car crosshead, counterweight or governor, as the case may be. (EC469/71)
Signals	204. Every automatic operation passenger elevator car shall have a push-button or a telephone to electrically transmit, or a mechanical gong to sound a clearly audible emergency signal to a person outside the hoistway. (EC469/71)
Capacity and data plates to be posted	205. Every elevator shall have posted in it the capacity and data plates as set out in the following provisions of the Code: <ul style="list-style-type: none"> (a) section 2.16; (b) clause 2.18.8; (c) section 2.20. (EC469/71; 495/08)
Illumination	206. (1) A permanent lighting fixture shall be provided in all pits, which shall provide an illumination of not less than five foot candles at the pit floor.
<i>Idem</i>	(2) Every elevator car shall be provided with illumination conforming to clause 3.6.7. of the Code. (EC469/71)

PART VII
EXISTING INSTALLATIONS OF ELECTRIC DUMBWAITERS

Application	207. This Part applies to existing installations of electric dumbwaiters. (EC469/71)
Hoistways	208. (1) Every dumbwaiter hoistway shall be fully enclosed, except at the landing openings, with substantial masonry, concrete, metal, wood or

glass walls, partitions, or screens and any opening in the sides of the hoistway shall reject a ball one inch in diameter except

- (a) any part of the enclosure within four inches of the counterweight runway shall be solid; and
- (b) an opening not over five inches wide by thirty-six inches high with its bottom approximately thirty inches from the landing floor, may be provided for access to a hand-rope.

(2) The height of a landing opening shall not exceed the height from the car floor to the underside of the car crosshead nor shall its width exceed the width of a car opening adjacent to that landing opening. (EC469/71) Landing opening

209. (1) Every hoistway opening of a dumbwaiter shall be guarded by a wood or metal door or gate extending from the sill to the top of the opening. Hoistway doors and gates

(2) A hoisting door or gate hereafter installed shall be vertically sliding and not collapsible. Later installation

(3) Every hoistway door or gate shall be solid or may have openings which will reject a ball two inches in diameter. Door or gate

(4) A hoistway door hereafter installed shall be provided with a vision panel of clear wired glass, unless the hoistway door automatically opens when the car is at the landing or unless "Car Here" lights or other similar devices are installed. (EC469/71) Later installation

210. Every hoistway door or gate of a dumbwaiter shall be provided with an interlocking device which shall prevent it from moving until such door or gate is closed, and prevent such door or gate from being opened unless the dumbwaiter is at a landing. (EC469/71) Locking device

211. Every guide rail shall be rigidly fixed and supported in proper alignment to safely withstand the loads likely to be imposed upon it by a car or counterweight. (EC469/71) Guides

212. (1) Every dumbwaiter car shall be fully enclosed on the side or sides adjacent to landing openings. Car enclosures

(2) Every such car shall have a fixed top. Fixed top

(3) The car enclosure shall be metal, wood or other suitable material capable of safely withstanding any load to which it may likely be subjected. (EC469/71) Enclosure material

213. No passageway or habitable space shall be under a hoistway or pit, unless the Chief Inspector is satisfied that provision has been made to Passage under hoistway

prevent injury to a person in the passageway or habitable space. (EC469/71)

Access to machine rooms	214. Safe and convenient access to a machine room and overhead machines shall be provided by a stair with handrails, or a fixed ladder, not located in the hoistway. (EC469/71)
Enclosure of machine rooms	215. (1) Every machine room and machinery space shall be enclosed to a height of six or more feet so that unauthorized persons cannot have access thereto.
Enclosure	(2) Every machine room and machinery space shall be enclosed and guarded from adjacent portions of the hoistway. (EC469/71)
Lighting	216. Every machine room and machinery space shall be lighted artificially to a minimum intensity of ten foot candles. (EC469/71)
Supports	217. (1) All dumbwaiter machinery shall be supported so as not to endanger the safety of persons adjacent to the dumbwaiter and to prevent any part of the dumbwaiter from becoming displaced.
Maximum safety computation	(2) The factors of safety, safe working stresses and allowable deflections of overhead beams and their supports to be used when computing the maximum capacity of the dumbwaiter shall be to the satisfaction of the Chief Inspector. (EC469/71)
Brakes	218. Every dumbwaiter shall have an electric brake which shall (a) stop and support the car with its load; and (b) automatically apply when the power is cut off. (EC469/71)
Slack rope device	219. Every dumbwaiter having a winding-drum machine or other positive method of hoisting shall have a slack rope device. (EC469/71)
Stopping device	220. Every dumbwaiter shall have a terminal stopping device to automatically stop the car at its terminal landings. (EC469/71)
Operating device	221. The operating device of a dumbwaiter shall be located so that it may be operated safely. (EC469/71)
Disconnecting switch	222. Every dumbwaiter shall have an externally-operated multipole disconnecting switch readily available and visible from the machine. (EC469/71)
Ropes	223. The rope or other means of hoisting the car or the counterweight shall (a) safely withstand the loads likely to be imposed upon it; (b) have a factor of safety equal to, or greater than that shown in table 18 of the Code;

- (c) not be spliced; and
- (d) be securely and individually fastened at each end by babbitt-filled sockets, clamps, or shackle-pins. (EC469/71)

224. Every dumbwaiter shall be provided with capacity and data plates as required by clause 7.4.3. of the Code. (EC469/71)

Capacity and data plates

PART VIII EXISTING INSTALLATIONS OF HAND POWER ELEVATORS

225. (1) This Part applies to existing installations of hand power elevators.

Application

(2) These elevators shall be used for freight only, and no person shall be allowed to ride on them. (EC469/71)

Hand powered elevators

226. (1) Every hoistway of an elevator shall be fully enclosed except at the landing openings with an unperforated material to a height of six feet or more above each floor or landing.

Construction of hoistways and hoistway enclosures

(2) Openwork enclosures may be used above the six foot level provided any opening in the openwork enclosure rejects a ball one inch in diameter, except any part of the enclosure within four inches of the counterweight runway shall be solid.

Openwork enclosure

- (3) Openwork enclosures may be constructed of
 - (a) steel wire grille or expanded metal, which shall be at least No. 13 U.S. wire gauge; or
 - (b) wood slats, which shall be mounted vertically and at least one inch nominal thickness.

Materials

(4) The entire hoistway facing the car entrance shall be sheathed with a substantial smooth material, including proper toe guards where required, to the satisfaction of the Chief Inspector. (EC469/71)

Sheath

227. Elevator machines may be located inside the hoistway enclosure at the top or bottom without intervening enclosures or platforms. (EC469/71)

Machines

228. A permanent, unobstructed safe and convenient means of access to machine rooms and machinery space shall be provided from outside the hoistway. (EC469/71)

Access to machine rooms

229. (1) Permanent electric lighting shall be provided in all machine rooms and machinery spaces.

Lighting

(2) The light control switch shall be located within easy reach of the access to such rooms or spaces. (EC469/71)

Light switch

Supports	230. All elevator machinery shall be supported to not endanger the safety of persons in, or adjacent to the elevator and to prevent any part of the elevator from becoming displaced. (EC469/71)
Pits	231. Pits are not required for elevators. (EC469/71)
Car top overtravel	232. A substantial coil spring car buffer shall be installed at the top of the hoistway and so located to prevent the bottom edge of the car platform from travelling more than eight inches above the top landing when the buffer is fully compressed. (EC469/71)
Habitable space under hoistways	233. There shall be no habitable space below the elevator or counterweight, unless the floor is supported to withstand any impact caused by the car with rated load or counterweight dropping freely onto the floor. (EC469/71)
Protection of hoistway landing openings	234. (1) All elevator hoistway landing openings shall be provided with hoistway doors or gates.
Distance	(2) The distance between the hoistway side of a door or gate and the hoistway edge of the landing sill shall be not more than four inches.
Types of doors	(3) Every hoistway landing door shall guard the full height and width of the opening and shall be one of the following types: (a) self-closing horizontally sliding or swinging; (b) manually operated vertically sliding counterweighted, single or double section; or (c) manually operated vertically sliding bi-parting counterbalanced.
Gate specifications	(4) Every hoistway landing gate shall guard the full width of the opening, and when in the closed position shall extend downwardly from a height of not less than five feet, six inches to the landing sill, unless lack of head room at the bottom landing opening makes such protection impracticable, in which case a gate may extend downwardly to a point not higher than eighteen inches above the landing sill.
Clearance	(5) The headroom clearance of a landing entrance opening shall be the same as the inside car clear height.
Opening	(6) Any opening in a hoistway landing gate shall reject a ball two inches in diameter.
Vision panel	(7) Every hoistway landing door shall be provided with a vision panel of clear wired glass, not over six inches wide and eighty square inches in area.

(8) A hoistway landing door or gate shall be built to withstand a force of seventy-five pounds applied perpendicularly to it at any point, without permanently deforming it or leaving its guides. (EC469/71)

Force

235. (1) Every hoistway landing door or gate shall be provided with a locking device actuated by the car, which will prevent the door or gate from opening unless the car is at that particular landing.

Locking devices

(2) Hoistway landing doors shall be provided with a device which will close them automatically when released.

Automatic closure

(3) Hoistway landing gates shall be provided with a device which will close the gates automatically when the car leaves the landing. (EC469/71)

Idem

236. (1) Cars shall be fully enclosed on the sides not used for entrances to a height of six or more feet with a material capable of rejecting a ball two inches in diameter.

Car construction

(2) Every car shall have a top capable of rejecting a ball one inch in diameter.

Car top

(3) The deflection of the enclosures shall not be more than inch when subjected to a force of 175 pounds applied perpendicularly to the enclosure at any point.

Deflection

(4) The car enclosure shall be secured to the car platform or frame in such a manner that it cannot work loose or become displaced in ordinary service.

Secured to platform or frame

(5) A door or gate is not required on the car. (EC469/71)

Door not required

237. (1) A capacity plate shall be posted in a conspicuous place in the elevator car and shall bear the rated load in pounds.

Capacity and notice plates

(2) A notice plate shall be posted in a conspicuous place in the elevator car and at every landing entrance and shall bear the following information in not less than inch letters:

Notice plate

FOR FREIGHT ONLY
NO PERSON SHALL RIDE ON ELEVATOR
(EC469/71)

238. Every elevator shall have at least two guide rails for the car and they shall

Guide rails

(a) extend at least six inches beyond the maximum possible travel of the car;

- (b) be securely fastened by through bolts or lag screws to their continuous support for their full length; and
- (c) have smooth and even joints. (EC469/71)

Counterweights	239. (1) Sections of counterweights, whether carried in frames or not, shall be secured by at least two tie rods passing through holes in the sections or by an arrangement approved by the Chief Inspector.
<i>Idem</i>	(2) The counterweight tie rods shall have lock nuts at each end, secured by cotter pins. (EC469/71)
Driving machines brakes	240. (1) Driving machines shall be equipped with a hand brake or an automatic brake operating in either direction of motion of the elevator, and capable of stopping and holding the car with its rated load.
Locked brake	(2) When the brake has been applied, it shall remain locked in the "ON" position until released by the operator. (EC469/71)
Suspension means	241. The hoisting ropes shall be fastened to the car crosshead and counterweight by babbiting or by a proper equalizing arrangement using suitable thimbles and at least two or more clips with the "U" of the clip bearing on the dead end of the rope. (EC469/71)
Operating and brake ropes	242. (1) The operating hand rope and brake rope shall be located outside the hoistway.
Type of rope	(2) The operating rope shall be of soft hemp at least 5/8 inch in diameter and be securely fastened at each end and shall be in proper vertical alignment to prevent bending or cutting where it passes through an opening in a floor. (EC469/71)
Power attachments not permitted	243. Elevators shall not be equipped with any means or attachment for applying electric or other power unless the elevator is permanently and completely converted into an electric elevator, complying with all requirements for electric elevators. (EC469/71)
Lighting	244. Adequate lighting shall be provided at each landing entrance. (EC469/71)
Hoistway clearances	245. (1) The minimum clearance between the side of the car and the hoistway enclosure shall be one inch.
Clearance	(2) The clearance between the car platform and the landing sill shall not be less than inch and not more than 1 inches. (EC469/71)

PART IX
REGULATIONS GOVERNING EXISTING INSTALLATIONS OF
HAND POWER DUMBWAITERS

- 246.** This Part applies to existing installations of hand-power dumbwaiters. (EC469/71) Application
- 247.** (1) Every hoistway of a dumbwaiter shall be fully enclosed except at the landing openings with an unperforated material to a height of six feet or more above each floor or landing. Construction of hoistways and hoistway enclosures
- (2) Openwork enclosures may be used above the six foot level provided any opening in the openwork enclosure rejects a ball one inch in diameter except any part of the enclosure within four inches of the counterweight runway shall be solid. Openwork enclosure
- (3) Openwork enclosures may be constructed of Materials
- (a) steel wire grille or expanded metal, which shall be at least No. 13. U.S. wire gauge; or
- (b) wood slats, which shall be mounted vertically and at least one inch nominal thickness.
- (4) The entire hoistway facing the car entrance shall be sheathed with a substantial smooth material, including proper toe guards where required, to the satisfaction of the Chief Inspector. (EC469/71) Idem
- 248.** (1) Dumbwaiter machines may be located inside the hoistway enclosure at the top or bottom without intervening enclosures or platforms. Machine rooms and supports
- (2) All dumbwaiter machinery shall be supported to not endanger the safety of persons adjacent to the dumbwaiter and to prevent any part of the dumbwaiter from becoming displaced. (EC469/71) Supported machinery
- 249.** (1) Permanent electric lighting shall be provided in all machine rooms and machinery spaces. Lighting
- (2) The light control switch shall be located within easy reach of the access to such rooms or spaces. (EC469/71) Idem
- 250.** Pits are not required for dumbwaiters. (EC469/71) Pits
- 251.** There shall be no habitable space below the dumbwaiter or counterweight unless the floor is supported to withstand any impact caused by the car with rated load or counterweight dropping freely onto the floor. (EC469/71) Habitable space under hoistway

Protection of hoistway landing openings	<p>252. (1) All dumbwaiter hoistway landing openings shall be provided with hoistway doors which shall guard the full height and width of the landings and shall be one of the following types:</p> <p style="padding-left: 40px;">(a) manually operated vertically sliding counterweighted, single or double section; or</p> <p style="padding-left: 40px;">(b) horizontal swing doors equipped with automatic door closers.</p>
Sign	<p>(2) Every hoistway landing entrance shall have conspicuously displayed on the landing side of each door in letters not less than two inches high the following:</p> <p style="text-align: center;">DANGER - DUMBWAITER - KEEP CLOSED (EC469/71)</p>
Hoistway doors	<p>253. Hoistway doors shall be provided with spring type latches to hold them in the closed position. (EC469/71)</p>
Construction of cars	<p>254. (1) Cars shall be enclosed, except at the entrances, with an unperforated material.</p>
Door, gate not required	<p>(2) Doors or gates are not required at the car entrances.</p>
Load sign	<p>(3) A plate shall be provided in a conspicuous place inside the car indicating the rated load. (EC469/71)</p>
Driving machine brakes	<p>255. (1) Driving machines shall be equipped with a hand brake or an automatic brake which will sustain the car with its rated load.</p>
Brake locked	<p>(2) When the brake is applied, it shall remain locked in the "ON" position until released by the operator. (EC469/71)</p>
Suspension means	<p>256. (1) Dumbwaiters having a rated load of more than 75 pounds shall be suspended by steel wire ropes having a factor of safety not less than 4.</p>
Rope safety factor	<p>(2) Dumbwaiters having a rated load of 75 pounds or less may be suspended by manila or braided cotton rope having a factor of safety of not less than 6. (EC469/71)</p>
Power attachments not permitted	<p>257. Dumbwaiters shall not be equipped with any means or attachments for applying electric or other power unless the dumbwaiter is permanently and completely converted into an electric dumbwaiter complying with all requirements for electric dumbwaiters. (EC469/71)</p>
Lighting	<p>258. Adequate lighting shall be provided at each landing entrance. (EC469/71)</p>
Hoistway clearance	<p>259. (1) The minimum clearance between the side of the car and the hoistway enclosure shall be one inch.</p>

(2) The clearance between the car platform and the loading sill shall not be less than inch and not more than 1 inches. (EC469/71) Clearance

**PART X
EXISTING INSTALLATIONS OF CHAIN AND ROPE HOIST
ELEVATORS**

260. (1) This Part applies to existing installations of chain or rope hoist elevators. Application

(2) These elevators shall be used for freight only, and no person shall be allowed to ride on the elevator car. (EC469/71) Freight elevator

261. (1) Every hoistway of an elevator shall be fully enclosed except at the landing openings with an unperforated material to a height of six feet or more above each floor or landing. Construction of hoistways and hoistway enclosures

(2) Openwork enclosures may be used above the six foot level provided any opening in the openwork enclosure rejects a ball one inch in diameter except any part of the enclosure within four inches of the counterweight runway shall be solid. Openwork enclosure

(3) Openwork enclosures may be constructed of Materials

- (a) steel wire grille or expanded metal, which shall be at least No. 13 U.S. wire gauge; or
- (b) wood slats, which shall be mounted vertically and at least one inch nominal thickness.

(4) The entire hoistway facing the car entrances shall be sheathed with a substantial, smooth material, including proper toe guards where required, to the satisfaction of the Chief Inspector. (EC469/71) Sheath

262. Elevator machines may be located inside the hoistway enclosure at the top without intervening enclosures or platforms. (EC469/71) Machines

263. (1) Permanent electric lighting shall be provided in all machine rooms and machinery spaces. Lighting

(2) The light control switch shall be located within easy reach of the access to such rooms or spaces. (EC469/71) Light switch

264. All elevator machinery shall be supported to not endanger the safety of persons in, or adjacent to the elevator and to prevent any part of the elevator from becoming displaced. (EC469/71) Supports

265. A suitable pit shall be provided to keep the car from bottoming. (EC469/71) Pits

Habitable space under hoistways	266. There shall be no habitable space below the elevator or counterweight, unless the floor is supported to withstand any impact caused by the car with rated load or counterweight dropping freely onto the floor. (EC469/71)
Protection of hoistway landing openings	267. (1) All elevator hoistway landing openings shall be provided with hoistway doors or gates.
Distance	(2) The distance between the hoistway side of a door or gate and the hoistway edge of the landing sill shall be not more than four inches.
Types of doors	(3) Every hoistway landing door shall guard the full height and width of the openings and shall be one of the following types: (a) self-closing horizontally sliding or swinging, single or double section; (b) manually operated vertically sliding counterweighted, single or double section; or (c) manually operated vertically sliding by-parting counterbalanced.
Gate specifications	(4) Every hoistway landing gate shall guard the full width of the opening and when in the closed position shall extend downwardly from a height of not less than five feet, six inches to the landing sill, unless lack of head room at the bottom landing openings makes such protection impracticable, in which case a gate may extend downwardly to a point not higher than eighteen inches above the landing sill.
Clearance	(5) The head room clearance of a landing entrance opening shall be the same as the inside car clear height.
Opening	(6) Any opening in a hoistway landing gate shall reject a ball two inches in diameter.
Vision panel	(7) Every hoistway landing door shall be provided with a vision panel of clear wired glass, not over six inches wide and eighty square inches in area.
Force	(8) A hoistway landing door or gate shall be built to withstand a force of 75 pounds applied perpendicularly to it at any point, without permanently deforming it or leaving its guides. (EC469/71)
<i>Idem</i>	268. Hoistway doors or gates shall be provided with hoistway unit system hoistway door combination mechanical locks and electric contacts. (EC469/71)
Car construction	269. (1) Cars shall be fully enclosed on the sides not used for entrances.
Car top	(2) Every car shall have a solid or perforated top, and perforated materials shall reject a ball one inch in diameter.

- (3) The deflection of the enclosures shall not be more than inch when subjected to a force of 75 pounds applied perpendicularly to the enclosure at any point. Deflection
- (4) The car enclosure shall be secured to the car platform or frame in such a manner that it cannot work loose or become displaced in ordinary service. Secured to platform or frame
- (5) A door or gate is not required on the car. (EC469/71) Door or grate
- 270.** (1) A capacity plate shall be fastened in a conspicuous place in the elevator car and shall bear the rated load in pounds. Capacity and notice plates
- (2) A notice plate shall be fastened in a conspicuous place in the elevator car and at every landing entrance and shall bear the following information in not less than inch letters: Notice plate
- FOR FREIGHT ONLY
NO PERSON SHALL RIDE ON
(EC469/71)
- 271.** Every elevator shall have at least two guide rails for the car and they shall Guide rails
- (a) extend at least six inches beyond the maximum possible travel of the car;
- (b) be securely fastened by through bolts or lag screws to their continuous support for their full length; and
- (c) have smooth and even joints. (EC469/71)
- 272.** (1) Sections of counterweights, whether carried in frames or not, shall be secured by at least two tie rods passing through holes in the sections or by an arrangement approved by the Chief Inspector. Counterweights
- (2) The counterweight tie rods shall have lock nuts at each end, secured by cotter pins. (EC469/71) *Idem*
- 273.** (1) Driving machines shall be controlled by hand rope or push button. Control
- (2) Machines that are controlled by a hand rope shall have such an arrangement that the rope shall return to the neutral position and shut off the electrical power to the machine when released. Return to neutral
- (3) Hand control ropes shall be located outside the hoistway and are to be inaccessible from inside the car. (EC469/71) Hand ropes not accessible inside car
- 274.** (1) Suspension means shall consist of not less than two wire ropes or one roller chain. Suspension means

Hooks	(2) Hooks on the ends of the chains or ropes shall be provided with a device which will prevent the hook from accidentally slipping off its connection on the car crosshead and overhead connection. (EC469/71)
Lighting	275. (1) Adequate lighting shall be provided at each landing entrance.
Light switch	(2) A proper light with switch shall be provided inside every car. (EC469/71)
Hoistway clearances	276. (1) The minimum clearance between the side of the car and the hoistway enclosure shall be one inch.
Clearance	(2) The clearance between the car platform and the landing sill shall not be less than inch and not more than 1 inches. (EC469/71)
Normal terminal stopping switches	277. (1) Upper and lower normal terminal stopping switches shall be provided and arranged to slow down and stop the car automatically at or near the top and bottom terminal landings, with any load up to and including rated load in the car, and from any speed attained in normal operation.
Terminal stopping switches	(2) Normal terminal stopping switches shall (a) be located on the car or in the hoistway; and (b) be operated by the movement of the car.
Mechanical stops	(3) All lifting chains or ropes shall be provided with mechanical stops to actuate the final limit switch on the machinery.(EC469/71)
Main line disconnecting means	278. A main line disconnect switch shall be provided and installed outside the hoistway in the proximity of the hoisting machine. (EC469/71)

PART XI SUBMISSION OF DRAWINGS AND SPECIFICATIONS

New installations	279. No person or company shall commence a new installation of an elevating device until the drawings and specifications thereof have been approved by the Electrical and Elevator Inspection Division of the Department of Community and Cultural Affairs. (EC469/71; 283/80; 87/84; 639/93)
Submission of drawings	280. The drawings and specifications and the Department of Community and Cultural Affairs specification forms shall be submitted in triplicate and shall furnish full information as to the size, composition and arrangement of the proposed new installation.

NOTE: Specification sheets may be obtained from the Electrical and Elevator Inspection Division of the Department of Community and Cultural Affairs on request. (EC469/71; 283/80; 87/84; 639/93)

281. If the proposed new installation complies with the regulations, the drawings and specifications thereof shall be stamped “Approved” by the Electrical and Elevator Inspection Division of the Department of Community and Cultural Affairs and one set returned to the person or company who submitted them. (EC469/71; 283/80; 87/84; 639/93) Approval

282. The drawing submitted for approval shall Drawing
 (a) be clear prints, other than photostats;
 (b) be prepared in conformity with good draughting practices; and
 (c) have on their face or endorsed on them, a statement, signed in waterproof ink by the person submitting them, that the drawings are identical with all other corresponding drawings submitted with them. (EC469/71)

283. The top sheet of each set of drawings shall set forth the following details: Details to be included
 (a) the name and address of the owner of the building or premises where the new installation is to be made;
 (b) such information as will enable an Inspector conveniently to locate that building or premises;
 (c) the name and address of the contractor, if known at the time;
 (d) the name, address and qualifications of the person by whom the drawings were prepared;
 (e) indication as to whether passengers or freight, or both are to be lifted or lowered; and
 (f) the maximum capacity of the elevating devices. (EC469/71)

284. The specifications submitted that are not embodied on drawings shall bear on the first page thereof a statement, signed in ink by the person submitting them, that all sets of specifications submitted at the same time are identical. (EC469/71) Specifications

285. The drawings shall have the required information as called for in sections 2.28 and 3.28 of the Code. (EC469/71; 169/91; 495/08) Further information

PART XII
FEES

286. (1) Fees shall be payable as indicated for the following: Fees
 (a) For the inspection of an elevator\$200
 (b) For the inspection of a dumbwaiter 110
 (c) For the inspection of an escalator200

(d) For the inspection of a manlift	200
(e) For the inspection of an inclined lift other than a ski tow	200
(f) For the inspection of a chair or gondola lift	550
(g) For the inspection of a T-bar, J-bar or Platter Pull	195
(h) For the inspection of a rope-tow	200
(i) For the inspection of a stage lift	200
(j) For the inspection of a construction hoist	200
(k) For the inspection of elevating devices for handicapped persons	165
(l) For an initial inspection, per hour or any part thereof (minimum charge is \$90)	90
(m) For a special inspection, per hour or any part thereof (minimum charge is \$90)	90

Idem

(2) Fees are payable on the submission of drawings and specifications submitted for approval whether or not the same are approved, as follows:

(a) For an elevator	\$275
(b) For a dumbwaiter	140
(c) For an escalator	220
(d) For a manlift	140
(e) For an inclined lift other than a ski tow	140
(f) For a chair or gondola lift	385
(g) For a T-bar, J-bar, or Platter Pull	275
(h) For a rope-tow	140
(i) For a stage lift	140
(j) For a construction hoist	275
(k) For an elevating device for handicapped persons	140

Provincial
Treasurer

(3) All fees are payable to the Provincial Treasurer. (EC668/95; 637/04; 495/08; 529/09; 246/12)