Crane Inspections — Know the Laws of Your Province



OHS crane inspection rules vary by province.

While all jurisdiction require employers to ensure that cranes are properly inspected in accordance with manufacturer's specifications, CSA and other applicable standards, there are significant differences with regard to inspection frequency and recordkeeping. Here's a summary of the rules in each part of Canada.

Crane Inspection and Recordkeeping Rules

FEDERAL (Canada Occupational Health & Safety Regs., Part XIV)

General Inspection: (a) Employer must create and keep at workplace written instructions for frequency and nature of inspection, testing and maintenance of cranes before they're used in workplace for first time; and (b) Inspection, testing and maintenance must be done by qualified person (Sec. 14.20)

Logs: (a) Qualified person must create and sign a written report of each inspection, test or maintenance work that: (i) lists the date of the inspection, testing or maintenance performed; (b) identifies the equipment that was inspected, tested or maintained; and (c) sets out the qualified person's findings or safety observations; and (b) Employer must keep the report at the workplace for a year (Sec. 14.20)

Mobile Cranes: Mobile cranes must be inspected, tested and maintained in accordance with section 5 of CSA Z150-1974, and supplement Z150S1-1977 (Sec. 14.21)

Repairs: (a) Equipment with a defect that creates a health or safety hazard must be taken out of service until it's repaired or modified by a qualified person; (b) If a part is replaced with a part of lesser strength or quality, employer must restrict use of the equipment to ensure the retention factor of the original part; and (c) Employer must keep a record of any repair or modification and of any restriction on use due to a replacement referred to in subsection (b) (Sec. 14.29)

ALBERTA (OHS Code)

Roofer's Hoist: Employer must ensure that a roofer's hoist is inspected daily by a competent worker designated by the employer (Sec. 97.3)

Rigging: Employer must ensure that rigging to be used during a work shift is inspected thoroughly before each period of continuous use during the shift to ensure it's functional and safe (Sec. 294)

Logs: Employer must keep a paper or electronic log book for each lifting device at a work site (other than manually operated hoists) and ensure that: (a) The log book is readily available for inspection by an OHS officer; (b) The most current log book of a mobile crane accompanies it or is available to the operator at all times; (c) The log book is transferred along with ownership of the device; (d) The following information is entered into the log book: (i) the date and time when any work was performed on the lifting device, (ii) length of time in lifting service either recorded as hours of service if the lifting device is equipped by the manufacturer with an hour-meter, or if required by the manufacturer's specifications, (iii) all defects or deficiencies and when they were detected, (iv) inspections, including examinations, checks and tests, that are performed, (v) repairs or modifications performed, (vi) a record of a certification, (vii) any matter or incident that may affect the safe operation of the lifting device and (viii) any other operational information specifically identified by the employer; (e) Each entry in a paper log book is signed by and each entry in an electronic log book identifies the person doing the work; and (f) In the case of a tower crane, that a senior representative of the employer at the work site confirms that the entries in the log book are correct every day that the tower crane is in operation (Sec. 65)

Repairs: Employer must ensure that: (a) Structural repairs or modifications to components of a lifting device are: (i) made only under the direction and control of a professional engineer, and (ii) certified by the professional engineer to confirm that the workmanship and quality of materials used has restored the components to at least their original capacity; and (b) If structural repairs or modifications are made, that (i) the repaired or modified components are individually and uniquely identified in the log book and on the component, and (ii) the professional engineer's certification makes reference to those components and their identification (Sec. 73)

BRITISH COLUMBIA (OHS Regulation, Part 14)

Pre-Use Inspection: (a) Before using a crane or hoist, operator must ensure that: (i) it was inspected for that work shift, and (ii) the control and safety devices were tested for that work shift; (b) Any defects found during inspection or use of a crane or hoist must be recorded in the inspection and maintenance record system and be reported immediately to the supervisor, who must determine the course of action to be taken; and (c) If a defect affects the safe operation of the crane or hoist, the equipment must not be used until the defect has been remedied (Sec. 14.35)

Overhead Cranes: A bridge crane, gantry crane or overhead crane must be inspected by a qualified person in accordance with the manufacturer's criteria inspection criteria specified by the manufacturer of the crane (Sec. 14.54.1)

Mobile Cranes: A mobile crane or boom truck must be inspected at least once every 12 months in accordance with good engineering practice to ensure it meets manufacturer's specifications and regulatory requirements and must not be used unless a professional engineer certifies that it's safe (Sec. 14.71)

Slings: (a) Slings and attachments must be visually inspected before use on each shift, and defective equipment must be immediately removed from service (Sec. 15.31); and (b) Chain slings must be thoroughly inspected at least once each year and a record of the inspection kept (Sec. 15.50)

MANITOBA (Workplace Safety & Health Regs., Part 23)

General Inspection: Employer must: (a) Develop and implement a maintenance and inspection schedule for a crane or hoist in accordance with the manufacturer's specifications or, if there are no manufacturer's specifications: (i) CSA W178.1-14, Certification of Welding Inspection Organizations, (ii) CSA W178.2-14, Certification of Welding Inspectors, (iii) CSA B167-16, Overhead cranes, gantry cranes, monorails, hoists, and jib cranes, (iv) CSA C22.2 No. 33-M1984 (R2014), Construction and Test of Electric Cranes and Hoists, (v) CAN/CSA Z150-16, Safety Code on Mobile Cranes, (vi) CAN/CSA Z185-M87 (R2016), Safety Code for Personnel Hoists, (vii) CSA Z248-17, Code for Tower Cranes, or (viii) CAN/CSA Z256-M87 (R2016), Safety Code for Material Hoists (Sec. 23.6); and (b) Ensure that a crane or hoist is inspected by the operator before the start of each work shift in order to detect any defect, malfunction or hazardous condition (Sec. 23.7)

Log Books: (a) If crane has rated load capacity of 907 kg (one ton) or more, employer must provide and maintain a log book that lists: (i) the date and time of any work done on the crane, (ii) length of crane's time in hoisting service, (iii) all defects or deficiencies and when they were detected, (iv) all inspections performed on the crane, including examinations, checks and tests, (v) a record of any certification of repairs or modifications, (vi) a description of the work performed by the crane each day, (vii) in the case of a tower crane, (A) whether or not the weight testing device was lifted for each working day, before the work of lifting loads began, and (B) a record of certification, and (viii) any matter or incident that may affect the safe operation of the crane; and (b) Employer must ensure that log books are transferred when ownership of the crane is transferred (Sec. 23.7)

Repairs: Employer must ensure that structural repairs or modifications to the components of a crane or hoist are: (a) Made only under the direction and control of a professional engineer; and (b) Certified by the professional engineer that the workmanship and quality of the materials used has restored the components to not less than their original capacity (Sec. 23.5)

NEW BRUNSWICK (OHS General Regulation)

General Inspection: Employer must ensure that a competent person thoroughly inspects and tests a hoisting apparatus, including any safety devices: (a) before it's first put into use, and (b) after any incident that may have damaged some part of the hoisting apparatus (Sec. 210(2))

Annual Inspection: (a) Employer must ensure that a competent person inspects a hoisting apparatus every 12 months by a competent person to ensure it meets the

manufacturer's specifications; (b) The person who does the annual inspection must certify in writing that the apparatus meets the manufacturer's specifications and list the details; (c) Mobile cranes subject to different annual inspection rules (Sec. 210.01)

Log Books: Employer must ensure that a log book recording inspections and repairs to a hoisting apparatus with a lifting capacity of 1815 kg or greater is maintained and made available to an OHS officer on request (logbooks not required for mobile cranes) (Sec. 210(3))

Mobile Cranes Annual Inspection: (a) Employer must ensure that a competent person supervised by an engineer inspects a mobile crane every 12 months; (b) The engineer supervising the annual inspection must certify in writing that: (i) the crane is in safe working order, and (ii) the inspection includes a visual weld inspection, is conducted in accordance with clause 4.3.5.1 of CSA Z150-98, Safety Code on Mobile Cranes; and (c) Employer must ensure that a copy of the certification provided under this section is accessible to the operator when in the cab and is available to an OHS officer on request (Sec. 213.21)

Mobile Cranes Visual Inspection by Operator: If more than one operator uses a mobile crane in a day or on more than one shift, each operator must, before using the crane, visually inspect all components that have a direct bearing on its safe operation of the crane including, at a minimum: (a) if practicable, all rope reeving, including load lines, jib suspension, boom hoist and mid-point suspension, for compliance with the crane and wire rope manufacturer's specifications, (b) all control mechanisms, before operation, for maladjustments or malfunctions interfering with proper operation, (c) all control mechanisms for excessive wear of components and contamination by lubricants or other foreign matter, (d) all safety devices for malfunction, (e) all air, hydraulic, lubricating and cooling systems for deterioration or leakage, (f) electrical apparatus for malfunction, signs of excessive deterioration, dirt, icing or moisture accumulation, (g) all exposed hydraulic hoses, particularly those that flex during the operation of the crane, (h) hooks and latches, for deformation, chemical and heat damage, cracks and wear, (i) the hydraulic system for proper oil level, (j) swivels for freedom of rotation, (k) clutches, brakes and attachments for malfunctions, (l) where practicable, outriggers for their ability to retract and extend and to bear the load, (m) outrigger boxes for structural damage, (n) tires for recommended pressure, (o) where practicable, all running ropes for any appreciable loss of original strength as indicated by general corrosion, broken or cut strands and visible broken wiresand for distortion of the rope, such as kinking, crushing, unstranding, birdcaging, main-strand displacement or core protrusion, (p) where practicable, rotationresistant ropes and boom-hoist ropes, to ascertain any damage or deterioration, and (q) where practicable, all points of rapid deterioration, such as flange points, crossover points and repetitive pickup points on drums (Sec. 213.31)

Mobile Crane Operator's Log: (a) Crane operators must record the results of visual inspections, including any deficiencies, in an operator's log kept for the crane; and (b) Employer must ensure that an operator's log is kept in the cab for each mobile crane so as to provide each operator with the results of previous visual inspections (Secs. 213.31 and 213.4)

NEWFOUNDLAND (OHS Regulations)

General Inspection: (a) A crane, derrick, hoist and similar equipment must be inspected as specified by the manufacturer to meet the requirements of: (i) the applicable CSA standard, (ii) a professional engineer, or (iii) other standard acceptable to WorksafeNL (Sec. 288); and (b) A crane or hoist must be maintained in accordance with the manufacturer's specifications and the applicable CSA standard and inspected at a frequency and to the extent required to ensure that each component is capable of carrying out its original function with an adequate margin of safety (Sec. 296)

Operator Inspection: (a) The operator must inspect the crane or hoist at the start of each shift and test control and safety devices in accordance with the manufacturer's specifications and regulatory requirements; (b) Any defect the operator finds must be: (i) recorded in the inspection and maintenance record log, and (ii) reported to the supervisor to decide what to do; and (c) If a defect affects the safe operation of the crane or hoist, the equipment may not be used until the defect is fixed (Sec. 310)

Repairs: (a) A crane or hoist may not be used until a condition that could endanger workers is fixed; and (b) A repair to a load bearing component of a crane or hoist must be certified by a professional engineer or the original equipment manufacturer as having returned the component to a condition capable of carrying out its original design function with an adequate margin of safety (Sec. 296)

Log Books: (a) There must be a log book or other record kept for a crane, derrick or similar hoisting equipment showing the maintenance history and structural modification and inspection of the equipment; (b) The log book or other record must be available at all times to the operator and a worker concerned with the equipment's maintenance and safe operation; and (c) That worker concerned with maintenance and safe operation is responsible for recording defects, operating difficulties and the need for maintenance and all maintenance and modification work performed (Sec. 297)

NOVA SCOTIA (Occupational Safety General Regulations, Part 7)

General Inspection: Employer must ensure that: (a) A hoist is inspected, tested and repaired in accordance with the manufacturer's specifications, or the specifications certified by an engineer (Sec. 55); (b) Hoist inspections are carried out in accordance with one of the following CSA or ANSI standards, depending on the type of equipment: (i) CSA B167, Safety Standard for Maintenance and Inspection of Overhead Cranes, Gantry Cranes, Monorails, Hoists, and Trolleys, (ii) CSA C22.2 No. 33, Construction and Test of Electric Cranes and Hoists, (iii) CSA Z150, Safety Code for Mobile Cranes, (iv) CSA Z248, Code for Tower Cranes, or (v) ANSI/ALI ALCTV, Automotive Lifts — Safety Requirements for Construction, Testing and Validation; (c) A hoist that has wire ropes, drums and sheaves is inspected: (i) visually on a daily basis by the operator, and (b) visually and manually by a competent person on a weekly basis (Secs. 70 and 72)

Annual Inspection: Employer must also ensure that: (a) A competent person inspects a hoist at least once a year; (b) A certificate from an engineer is

obtained each year for mobile or overhead crane with a capacity of greater than 5 t; (c) A certificate from an engineer is obtained before it's put into operation and once a year after that; and (d) The above inspections or certifications confirm that the hoist has a rated load identified and that no component will fail within its rated load (Sec. 73)

Visual Inspections: (a) Employer must also ensure that a competent person visually inspects a hoist, including any safety devices, for defects that may affect its structural integrity: (i) before it's put into service initially or after 1 month or more of disuse, (ii) once during every month of operation, and (iii) after any incident or repair, including contact with an energized utility line or equipment that may have damaged some part of the hoist or endangered any person (Sec. 75); and (b) Hoist operator must also visually inspect the hoist on a daily basis before use to verify that it's in adequate working order (Sec. 76)

Log Books: (a) Employer must keep a record of: (i) each required inspection of a hoist, and (ii) each repair potentially affecting the structural integrity of a component of a hoist that supports a load; and (b) Those records must list the date, time, nature and results of the inspection or repair and name of the person who performed the inspection or repair to a hoist (Sec. 75)

Repairs: If an inspection finds a defect affecting the hoist's the safe operation, employer must remove the hoist from service and repair it before it's put back into service (Sec. 75)

Rigging: (a) Employer must ensure that rigging is inspected by a competent person in accordance with latest version of: (i) ASME B30.9, Slings, (ii) ASME B30.10, Hooks or (iii) ASME B30.20, Below-the-Hook Lifting Devices, or (iv) professional engineer specifications; (b) Employer must also ensure that a competent person inspects rigging hardware before each use to ensure that no defect exists that may affect its structural integrity; (c) Employer must also ensure a competent person inspects the rigging hardware: (i) before it's put into initial service or after one month or more of disuse, and (ii) once during every year that it's in operation; (d) Employer rigging hardware is removed from service until it's repaired if the competent person doing the inspection finds any defect that may affect the rigging hardware's structural integrity; (e) Employer must keep a record of the rigging inspections and repairs listing the date, time, nature and results of the inspection or repair and the name of the person who performed the inspection or repair (Sec. 80)

ONTARIO (Industrial Establishments Regulation)

General Inspection: Lifting device must be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated before its first use and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year (Sec. 51)

Log Books: Competent person doing the above examination must sign a written record, which must be kept for at least 1 year or such longer period as necessary to ensure that at least the 2 most recent records are kept (Sec. 51)

ONTARIO (Construction Projects Regulation)

General Inspection: Lifting device must be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated before its first use and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year (Sec. 51)

Log Books: The owner of a crane or similar hoisting device must: (a) Keep a permanent record of all inspections of, tests of, repairs to, modifications to and maintenance of the equipment; (b) Put the above information in a log book kept at the project for: (i) the immediately preceding 12 months, and (ii) the period the crane or hoisting device is on the project; and (c) Rretain and make available to the constructor on request copies of all log books and records for the crane or hoisting device (Sec. 152)

Cable: (a) All cable used by a crane or similar hoisting device must be visually inspected by a competent worker at least once a week when the crane or similar hoisting device is being used; and (b) Worker performing an inspection must record the condition of the rope or cable inspected in the log book

PRINCE EDWARD ISLAND (OHS Act General Regulations)

General Inspection: Employer must designate a competent person to thoroughly inspect and test hoisting apparatus including safety devices: (a) before it's first put into use; (b) once a month; (c) after any incident which may have damaged some part of the apparatus (Sec. 34.5(2))

Log Books: Employer must ensure that an inspections and repairs log book is maintained and made available to an OHS officer on request (Sec. 34.5(3))

Visual Inspection: Operator must inspect hoisting apparatus before use to verify it's in safe working order (Sec. 34.6(3))

QU□BEC (OHS Regulation)

General Inspection: Hoisting device must be inspected before first use and inspected and maintained in accordance with the manufacturer's instructions or standards offering equivalent safety (Sec. 245)

SASKATCHEWAN (OHS Regulation)

General Inspection: Employer must ensure that a hoist, crane or lifting device is inspected by a competent person to determine whether the hoist, crane or lifting device is in safe working condition: (a) Before the hoist, crane or lifting device is used at the start of each work shift; and (b) At regular intervals as recommended by the manufacturer (Sec. 216(1))

Log Books: Employer must: (a) Provide a log book for each hoist and crane with a rated load greater than 5 tonnes and ensure the log book is kept readily available; (b) Give a copy of the log book to the operator on request; (c) Ensure that the hours of service of the hoist or crane and all details of any required inspection, maintenance or calibration are recorded in the log book; (d) Ensure that each entry required by clause (c) is signed by the person who

performs the inspection, maintenance or calibration; (e) Review and sign the log book on a regular basis; (f) Where the supplier of a hoist or crane provides a log book, ensure that the above information and signatures are recorded in the supplier's log book instead of the employer's log book and that the supplier's log book is kept with the hoist or crane (Sec. 215); and (g) Ensure that the competent person that does daily inspections of hoisting equipment and personnel lifting units records the details of the inspection in the log book (Sec. 207(1))

Mobile Crane: Employer must ensure that a mobile crane is subjected to a thorough inspection, including non-destructive testing, under the supervision of a professional engineer every 2 years or 1,800 hours of operation, whichever comes first (Sec. 216(3))

Tower Crane: Employer must ensure that a tower crane is subjected to a thorough inspection, including non-destructive testing, under the supervision of a professional engineer both: (a) Before erection at each site; and (b) At subsequent intervals of 2,000 operating hours or one year, whichever occurs first (Sec. 216(4))

Repairs: (a) If a defect or unsafe condition that may create a hazard to a worker is found in a hoist, crane, lifting device or rigging, employer must: (i) take steps immediately to protect the health and safety of any worker who may be at risk until the defect is repaired or the unsafe condition is corrected, and (ii) repair any defect or correct any unsafe condition as soon as reasonably practicable (Sec. 216(2)); (b) If the inspection of a hoist, crane or lifting device reveals a condition that might render the equipment unsafe or incapable of raising the rated load, employer must not require or permit the use of the equipment until any necessary repairs are completed (Sec. 217(1)); (c) Employer must ensure that a structural repair or modification to a crane or hoist component is performed only under the direction and control of a professional engineer (Sec. 217(2)); (d) Before a hoist or crane is used after a structural repair or modification, employer must ensure that: (i) the equipment is tested under the direction of a professional engineer, and (ii) a professional engineer has determined the rated load of the repaired or modified hoist or crane and has certified that the hoist or crane is capable of safely raising the new rated load (Sec. 217(3)); and (e) If the rated load of a hoist or crane after repair or modification differs from the rated load before repair or modification, employer must ensure that a new indication of load rating is provided (Sec. 217(4))

NORTHWEST TERRITORIES & NUNAVUT (OHS Regulations)

General Inspection: Employer must ensure that a hoist, crane or lifting device is inspected by a competent person to determine whether the hoist, crane or lifting device is in safe working condition: (a) Before the hoist, crane or lifting device is used at the start of each work shift; and (b) At regular intervals as recommended by the manufacturer (Sec. 216(1))

Log Books: Employer must: (a) Provide a log book for each hoist and crane with a rated load greater than 5 tonnes and ensure the log book is kept readily available; (b) Give a copy of the log book to the operator on request; (c) Ensure that the hours of service of the hoist or crane and all details of any required inspection, maintenance or calibration are recorded in the log book;

(d) Ensure that each entry required by clause (c) is signed by the person who performs the inspection, maintenance or calibration; (e) Review and sign the log book on a regular basis; (f) Where the supplier of a hoist or crane provides a log book, ensure that the above information and signatures are recorded in the supplier's log book instead of the employer's log book and that the supplier's log book is kept with the hoist or crane (Sec. 221); and (g) Ensure that the competent person that does daily inspections of hoisting equipment and personnel lifting units records the details of the inspection in the log book (Sec. 213(1))

Mobile Crane: Employer must ensure that a mobile crane is subjected to a thorough inspection, including non-destructive testing, under the supervision of a professional engineer every 2 years or 1,800 hours of operation, whichever comes first (Sec. 222(3))

Tower Crane: Employer must ensure that a tower crane is subjected to a thorough inspection, including non-destructive testing, under the supervision of a professional engineer both: (a) Before erection at each site; and (b) At subsequent intervals of 2,000 operating hours or one year, whichever occurs first (Sec. 222(4))

Repairs: (a) If a defect or unsafe condition that may create a hazard to a worker is found in a hoist, crane, lifting device or rigging, employer must: (i) take steps immediately to protect the health and safety of any worker who may be at risk until the defect is repaired or the unsafe condition is corrected, and (ii) repair any defect or correct any unsafe condition as soon as reasonably practicable (Sec. 223(2)); (b) If the inspection of a hoist, crane or lifting device reveals a condition that might render the equipment unsafe or incapable of raising the rated load, employer must not require or permit the use of the equipment until any necessary repairs are completed (Sec. 223(1)); (c) Employer must ensure that a structural repair or modification to a crane or hoist component is performed only under the direction and control of a professional engineer (Sec. 223(2)); (d) Before a hoist or crane is used after a structural repair or modification, employer must ensure that: (i) the equipment is tested under the direction of a professional engineer, and (ii) a professional engineer has determined the rated load of the repaired or modified hoist or crane and has certified that the hoist or crane is capable of safely raising the new rated load (Sec. 223(3)); and (e) If the rated load of a hoist or crane after repair or modification differs from the rated load before repair or modification, employer must ensure that a new indication of load rating is provided (Sec. 223(4))

YUKON (OHS Regulations)

General Inspection: Cranes and hoists must be inspected and maintained as specified by the manufacturer's manual, unless otherwise approved by the original equipment manufacturer or a professional engineer (Sec. 5.07(1))

Pre-Shift Inspection: (a) Operator must inspect the crane or hoist at the beginning of each shift and test control and safety devices as specified by the manufacturer and the OHS Regulations; (b) Any defects found during inspection or use of a crane or hoist must be recorded in the inspection and maintenance record system and reported immediately to the supervisor, who determines the action to be taken; and (c) If a defect affects the safe operation of the crane

or hoist, the equipment must not be used until the defect is fixed (Sec. 5.27)

Log Books: (a) Equipment operator and other persons who inspect and maintain equipment must keep records of inspection and maintenance meeting the requirements of OHS Regulations must be kept by the equipment operator and other persons inspecting and maintaining the equipment for: (i) a crane or hoist with a rated capacity of 1,000 kg (2,200 lbs.) or more, (ii) a crane or hoist used to support a worker, (iii) a tower crane, (iv) a mobile crane, boom truck or aerial ladder crane, (v) a side boom tractor or pipe layer, (vi) a construction material hoist, (vii) a chimney hoist, and (viii) any other type of hoisting equipment specified by the OHS director (Sec. 5.07(3)); (b) Modifications to a crane or hoist and maintenance history must be recorded in the inspection and maintenance records system, and the equipment manuals must be revised as necessary to ensure that adequate and appropriate information is available for safe use, operation and maintenance of the equipment (Sec. 5.08(3))

Mobile Cranes: (a) Mobile cranes or boom trucks, and aerial ladder cranes must be inspected and certified by a professional engineer: (i) before it's first put into service, (ii) after any damage and subsequent repair, and (iii) if the crane has been overstressed; (b) Mobile cranes, boom trucks and aerial ladder cranes must be inspected in accordance with good engineering practice at least every 12 months, and certified as safe for use by a professional engineer, the crane manufacturer or the crane manufacturer's authorized representative; and (c) When mobile cranes, boom trucks or aerial ladder cranes are temporarily located at a remote workplace at the time of the inspection in subsection (b), the annual inspection and certification required by subsection (b) must not be delayed more than 3 months (Sec. 5.61)

Repairs: A crane or hoist may not be used until any condition that could endanger workers is fixed (Sec. 5.07(2))

Slings: (a) Slings and attachments must be visually inspected before use on each shift and immediately removed from service if the equipment is found to be defective (Sec. 5.43); (b) A chain sling must be thoroughly inspected at least once a year with a record of the inspection maintained (Sec. 5.46)