

Level Up, Own Your Lift *Self-Planned Inspections*

What is the “Level Up; Own Your Lift” self-planned inspection process?

The “Level Up; Own Your Lift” inspection program is a self-planned inspection process for worksites that use cranes (mobile, self-erect and tower) to measure your responsible persons’/parties’ compliance with crane safety.

BC Crane Safety is constructing crane-process-specific self-planned inspection questions and support materials for:

- Prime contractors
- Crane employers
- Crane owners
- Crane supervisors
- Crane operators

Preventive Maintenance Questions

BC Crane Safety is providing these self-planned inspection questions to educate crane stakeholders for a better understanding of their health and safety responsibilities to comply with WorkSafeBC’s Occupational Health and Safety Regulation and relevant CSA standards.

This set of questions have been developed in conjunction with WorkSafeBC’s Crane/Mobile Equipment Team. It is recommended that crane employers and owners refer to these questions to improve their company or site safety management systems.

Plan — Responsibilities Questions

Questions: Owners’ Logbook	Validation
<p>1. Describe the employer’s system for keeping their cranes inspected, tested, and maintained in accordance with the manufacturer’s instructions, the Occupational Health and Safety Regulation and the associated CSA standards?</p> <p>OHSR 4.3(2), CSA Z248 – 7.1</p>	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete
<p>2. Does the employer have an established maintenance program that specifically refers to their crane fleet?</p> <p>CSA Z248 - 7.2</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>3. Has the crane owner designated a qualified person to oversee the maintenance and repair of their cranes?</p> <p>OHSR 14.13(1), 14.13(4)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No

What is the planned inspection about?

The self-planned inspection uses these questions to conduct a consistent and responsibility-driven inspection of the crane-related parties on the worksite.

Do — Site Operations Questions

Questions — Owner's Logbook/Record	Validation
4. How has the employer confirmed the qualifications of the designated person? WCA 21, CSA Z248 7.1	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete
5. Describe the maintenance supervisor's role, responsibilities, and qualifications. CSA Z248 - 7.1	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete
6. Does the employer have a system for hiring, training, and supervising the workers carrying out inspections and maintenance of their cranes and crane equipment? OHSR 14.13(4)	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete
7. Describe maintenance supervisor's process for recording all inspection and maintenance carried out in the crane owners' logbook. OHSR 14.13(4), 14.14	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete
8. Describe the employer's system for keeping inspection and maintenance records for each crane in the fleet. OHSR 4.9, 14.14	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete
9. Do the owner's logbook entries contain detailed information regarding the inspection or maintenance activity carried out? CSA Z248 - 6.2.2	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete

Check — Crane Operations Maintenance Logs Questions

Questions — Maintenance Logs/Records	Validation
10. Describe the employers process for maintaining records of all modifications. OHSR 14.15(3)	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete
11. Do the owners' logbook entries contain the name of the worker carrying out the inspection or maintenance task? CSA Z248 - 6.2.1	<input type="checkbox"/> Yes <input type="checkbox"/> No
12. Do the records show the date on which such work was performed and by whom, and include all incidents of misadventure and all damage sustained and subsequent repairs recorded? CSA Z248 - 6.2.3	<input type="checkbox"/> Yes <input type="checkbox"/> No

How many types of self-planned inspections are there?

The self-planned inspection uses these questions to conduct a consistent and responsibility-driven inspection of the crane-related parties on the worksite.

There are five types of inspections, including:

- Crane Employer/Site Inspections
- Provisional Operator Supervisor Checks
- Crane Assembly Supervisor Checks
- Preventive Maintenance Inspections
- Crane Operator Qualification Checks

Inspection/Check Questions are available for download on the BC Crane Safety website.

Check - Crane Operations Maintenance Logs, Questions, continued

Questions — Maintenance Logs/Records	Validation
<p>13. Does the owner's logbook contain information regarding all third-party inspection or maintenance companies used to carry out the employer's work? CSAZ248 - 7.1</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>14. Has the employer confirmed the qualifications of third-party maintenance company and personnel carrying out structural welding and other repairs or modifications? CSAW59 & CSAW47.1</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No

Check - Crane Maintenance System Questions

<p>15. Describe the employer's system for maintaining records of inspections and maintenance carried out while the crane is in operation at a work site, including daily, weekly, monthly, quarterly, annual, and special inspections. CSA Z248 - 6.2.3</p>	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete
<p>16. Does the operator's logbook show in detail all tests (non-destructive or other), inspections, maintenance, repairs, revisions, and modifications? OHSR 14.79, CSA Z248 - 6.2.3</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>17. Describe the employer's process for collecting and keeping the inspection and maintenance records generated at work sites into the owners log once the crane is returned to the employer's yard or storage. OHSR 14.79, CSA Z248 - 6.2.1(b)</p>	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete
<p>18. Can the employer describe their system to inspect, test and maintain crane components such as electrical systems, control systems, brakes, slewing gears, gear boxes in accordance with the manufacturer's requirements? CSA Z248</p>	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete

Check — Crane Components Questions

Questions — Inspection Systems	Validation
<p>19. Are the major structural tower crane components uniquely identified, and is that identification being used in the reports for inspection, testing, and certification for repairs and modifications including Non-destructive testing (NDT) inspections</p> <p>OHSR 14.77, CSA Z248 - 5.2.3</p>	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete
<p>20. Describe the system for ensuring that all fixed wire ropes are inspected prior to each tower crane assembly</p> <p>CSA Z248 - 6.4.2(b)</p>	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete
<p>21. Describe the process for inspection and maintenance of high tensile bolts and other connecting hardware.</p> <p>CSA Z248 - 5.2.3</p>	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete

PLAN, DO, CHECK, & ACT

BC Crane Safety’s Level Up Self-Planned Inspections are education and awareness materials for crane stakeholders to use an informed approach to inspections as part of a safety management system focusing on worksite monitoring and continuous improvement.

Act — Post Inspection Discussion

Continuous Improvement Next Steps

During the post inspection discussion, please encourage the worksite representatives to act on the key learnings or areas of improvement.

If unsure, help them to identify 1-2 measures that need/must be corrected, changed, eliminated, or modified to improve worker and worksite safety.

The Act stage of the Plan-Do-Check-Act process is where the worksite representative/superintendent implements an improved baseline of operations and re-measures implementation to ensure improvements/corrections. By measuring implementation, i.e., identifying a lower level of risk, reducing hazard severity/frequency, the worksite is taking positive action towards improved health and safety.

WCB OHSR EXCERPTS

Included are some of the relevant parts of the Occupational Health and Safety Regulation (OHSR) on crane employer and site responsibilities.

Workers Compensation OHSR — Excerpts

Standards – OHSR 14.2 (6)

A tower, hammerhead crane or self-erecting tower crane must meet the .05 of CSA Standard Z248-2004, Code for Tower Cranes.

Inspection, maintenance and repair – OHSR 14.13

- (1) Each crane and hoist must be inspected and maintained at a frequency and to the extent required to ensure that every component is capable of carrying out its original design function with an adequate margin of safety.
- (2) A crane or hoist must not be used until any condition that could endanger workers is remedied.

Workers Compensation OHSR — Excerpts, continued

- (3) Any repair to load bearing components 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.
- (4) Maintenance or repair of a crane or hoist must be done by or under the direct supervision of a qualified person.

Inspection and maintenance records – OHSR 14.14

Records of inspection and maintenance meeting the requirements of Part 4 (General Conditions) must be kept by the equipment operator and other persons inspecting and maintaining the equipment, for

- (a) a crane or hoist with a rated capacity of 900 kg (2 000 lbs) or more,
- (b) a crane or hoist used to support a worker,
- (c) a tower crane.

Manuals and records – OHSR 14.79

The following documents respecting operation, inspection, maintenance and repair of a tower crane must be kept at the workplace where and while the crane is erected:

- (a) the portions of the manufacturer's manual or engineer's instructions required by section 14.12 (3);
- (b) all records dated from the date of structural certification under section 14.77, including those specified in section 14.75 (5);
- (c) in the case of a self erecting tower crane, all records dated from the date of the last certification of the crane.

Limit devices – OHSR 14.81

- (1) A tower crane must have automatic travel limit switches and automatic overload prevention devices that prevent overloading at any trolley position, the load block from travelling beyond the highest allowable position specified by the manufacturer and the trolley from travelling beyond the allowable limit specified by the manufacturer.

FOR MORE INFORMATION

For more crane safety related information, including operator certification, contact BC Association for Crane Safety (BC Crane Safety)

Where can I find out more information about crane safety?

Check BC Crane Safety's websites at:

www.bccranesafety.ca