

Mobile crane inspection checklist

Employer information

Crane company _____ Date _____

Site address: _____

Operator name: _____ Operator certification _____

Crane make _____ Crane model _____ Crane SN _____

Crane pre-setup and pre-operation

	OHS ref	Yes	No
1. Is the crane operator certified in British Columbia?			
Crane operator is B.C. certified (ITA BC, CraneSafe, BC Equivalency). Guideline G14.34.1	14.34.1(a)	<input type="radio"/>	<input type="radio"/>
Employer can confirm operator is qualified and trained to operate crane. Guideline G14.34	14.34	<input type="radio"/>	<input type="radio"/>
Operator certification current and correct for crane size and type. CraneSafe Level B certified trainee has indirect and direct supervision. See BCACs website.	14.34.1(b)	<input type="radio"/>	<input type="radio"/>
2. Is the annual crane inspection current?			
Current annual inspection documents available for review, confirming P.Eng. has inspected and certified all critical components (structural, mechanical, controls) as safe for use. Guideline G14.71	14.71(1)	<input type="radio"/>	<input type="radio"/>
A crane boom used with a vibratory hammer for driving piles must be inspected at least once every 3 months.	14.72(1)	<input type="radio"/>	<input type="radio"/>
A crane boom used with a vibratory pile extractor or with a drop hammer or used for dynamic compaction is inspected at least once a month.	14.72(2)	<input type="radio"/>	<input type="radio"/>
3. Is the combination crane (boom truck) stability tested?			
Certified stability test document is available for review. Test document states unit (crane and carrier) has been tested to <i>ANSI J765, Crane Load Stability Test Code</i> . Document confirms crane is safe to operate in all positions (360°) using manufacturer's supplied load chart; or crane has reduced capacity in some positions and certified Custom Load Chart is provided to confirm actual allowable crane loads. Guideline G4.8	4.8(2)(e) 14.(2)(1) 14.5(3)	<input type="radio"/>	<input type="radio"/>
4. Is the manufacturer's manual in the crane or at the workplace?			
Manufacturer's manual must be in machine or at the worksite for review and reference.	14.12(2)	<input type="radio"/>	<input type="radio"/>
5. Is the daily crane pre-use inspection completed and documented?			
Pre-shift inspection documented in maintenance log book. Inspection includes machine components referenced in manufacturer's manual or standard.	14.35 4.9(2)(b)	<input type="radio"/>	<input type="radio"/>
Log book has entries for all inspections, testing, modification, repair, and maintenance.	4.9(2)(c)	<input type="radio"/>	<input type="radio"/>
6. Can the crane be set up with the outriggers fully extended and set on cribbing?			
Crane outriggers extended and set as per manufacturer's load chart or custom load chart.	14.15(1)	<input type="radio"/>	<input type="radio"/>
Crane outrigger beams marked to indicate correct extension is achieved.	14.67(2)	<input type="radio"/>	<input type="radio"/>
Crane outrigger float pads set on appropriate cribbing for soil or base (minimum 3:1 cribbing under float pad).	14.69(4)	<input type="radio"/>	<input type="radio"/>

	OHS ref	Yes	No
Crane outriggers or track frames minimum 1:1 distance away from slope or excavation depth.	14.69	<input type="radio"/>	<input type="radio"/>
Crane support surface adequate or certified to support machine and load safely.	14.69	<input type="radio"/>	<input type="radio"/>
Crane set up with turntable level (usually 0° to 1° — refer to operator's manual).	14.66(1)	<input type="radio"/>	<input type="radio"/>
Crane on floating support (barge or derrick) has certified marine load chart and listometer device.	14.66(3)	<input type="radio"/>	<input type="radio"/>
7. Is the lift planned with site-specific circumstances evaluated?			
Critical lift procedure in place for tandem (two-crane) lift, crane-supported work platform, lift over and between high-voltage power lines, lifting a submerged load, load centre of gravity changing, or 90% of crane capacity @ 50% crane boom length.	14.42 14.42(1)	<input type="radio"/>	<input type="radio"/>
People on-site not involved in crane operations are aware of lift hazards and are safe.	14.38(6)	<input type="radio"/>	<input type="radio"/>
Is crane load or machine slewing a hazard? Will loads be passed over people?	14.40	<input type="radio"/>	<input type="radio"/>
Operator has full control of crane and not engaged in other duties.	14.37.1	<input type="radio"/>	<input type="radio"/>
Operator knows weight of load being lifted.	14.36(1)	<input type="radio"/>	<input type="radio"/>
Traffic control in place, if required.	18.2	<input type="radio"/>	<input type="radio"/>
High-voltage power lines — form 30M33 is available and minimum limits of approach procedure is developed, reviewed, and followed.	14.52.1 19.24	<input type="radio"/>	<input type="radio"/>
Crane and equipment overlapping procedure in place for crane-crane, crane-tower crane, or crane-pump truck.	14.49.1	<input type="radio"/>	<input type="radio"/>
Qualified signal person has clear view of lift areas that operator cannot see.	14.47	<input type="radio"/>	<input type="radio"/>
8. Safety devices (operator aids)			
Lift crane (not duty-cycle crane) with capacity of 11 tons or more has load cell or manufactured system that doesn't allow crane to lift beyond rated capacity.	14.64 14.36(2)	<input type="radio"/>	<input type="radio"/>
Lift crane (not duty-cycle crane) has anti-two-blocking device. This includes articulating boom cranes fitted with a winch (as per CSA and ASME Standards).	13.28	<input type="radio"/>	<input type="radio"/>
Telescopic boom or lattice boom crane has boom angle indicator (mechanical or electric).	14.7	<input type="radio"/>	<input type="radio"/>
Crane has a horn (audible warning device).	14.18	<input type="radio"/>	<input type="radio"/>
Fire extinguisher in crane cab (minimum rating 10 B.C.).	14.33	<input type="radio"/>	<input type="radio"/>
9. Maintenance, inspection, and repair			
Crane mechanical deficiencies noted in log book. Crane inspected frequently enough to ensure components capable of carrying out original design functions (as referenced in operator's manual and standard). Guideline G14.13.	14.13	<input type="radio"/>	<input type="radio"/>
Crane maintenance and repair done by or under direct supervision of qualified person.	14.13	<input type="radio"/>	<input type="radio"/>
Crane structural and load-bearing repairs certified.	14.15	<input type="radio"/>	<input type="radio"/>
Crane hoist lines inspected for broken wires, crushing, and correct drum spooling.	15.25	<input type="radio"/>	<input type="radio"/>
Crane outrigger float pads secured to outrigger jacks.	14.67(4)	<input type="radio"/>	<input type="radio"/>
Crane controls clearly marked for their function.	14.28	<input type="radio"/>	<input type="radio"/>

Crane lift capacity analysis

	Description and weights
10. Load information	
Load description (name, size, lengths, shape)	
Load weight (from manufacturer, design drawing, trucking company scale)	
Crane block and ball weight (from crane load chart or manufacturer's manual)	
Load rigging weight (from rigging supplier or scale)	
Gross load weight (load weight + block/ball + rigging)	
Crane information	
Crane boom length and configuration: counterweight installed per configuration	
Load placement distance (crane boom radius from centre pin)	
Crane gross capacity (from load chart @ radius @ boom length/configuration)	
Crane component deductions (weight of crane jib, load line, rooster sheave from load chart)	
Crane net capacity (crane gross capacity — crane component deductions)	
Percentage of crane capacity (gross load weight ÷ crane net cap x 100)	

Reference documents

CSA — Z150-98, *Safety Code for Mobile Cranes*

ANSI/ASME — B30.5-2004, *Safety Code for Mobile and Locomotive Cranes*

ANSI/ASME — B30.22-2005, *Safety Code for Articulating Boom Cranes*

WCB Standard WPL 2, *Design, Construction and Use of Crane Supported Work Platforms*, 2004