



Washington State Department of
Labor & Industries



Construction crane compliance, consultation, and rule updates

Bill Sloniker - Crane Technical

Phone: (206) 715-3287

Email: SLON235@LNI.WA.GOV

Agenda

High level overview of:

- Crane compliance inspection
- Consultation
- Construction crane rule changes
- Q&A



Construction Crane Compliance Inspection

- What would I be looking for during a compliance visit?
- Why would compliance perform an inspection?
- Inspection process and what to expect:
- Violations were found. Now what do I do?
- Closing conference and what to expect:
- I was cited. Now what happens?



Construction Crane Compliance Inspection

- What would I be looking for during a compliance visit?
- Why would compliance perform an inspection?
- Inspection process and what to expect:
- Violations were found. Now what do I do?
- Closing conference and what to expect:
- I was cited. Now what happens?

Construction Crane Compliance Inspection

- What would I be looking for during a compliance visit?


Construction Crane Compliance Inspection

- Why would compliance perform an inspection?
- In order to determine that personnel are qualified and certified.
- Potential dangers seen from the road.
- Complaint.
- Referral.

Construction Crane Compliance Inspection

- Inspection process and what to expect:
- Opening conference
- Obtain copies of documents
- Interviews
- Inspection

Division of Occupational Safety and Health
MS 44600

 **Inspection Worksheet (1A)**

Inspection #	COHO ID(s)	K9208	Credentialed personnel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date of Entry	Time of Entry
Business name		Consent Statement My name is <u>Bill</u> I am an Inspector for the State of Washington, Dept of Labor and Industries. I am here to conduct a health and/or workplace safety inspection (show ID credentials). May I have permission (or consent) to perform the inspection? If yes, proceed. Employer Rep: _____			
Site Address		Denied by: _____ If, and only if, the owner or his/her authorized representative does not affirmatively respond to the above requests for consent to inspect, the inspector will then state: "Thank you, the state may seek a warrant for entry upon an inspection of the premises from a court of competent jurisdiction and such a warrant may be issued to permit me to conduct the inspection."			
Mailing Address		Date/Time denied	Re-entry Date/Time		
Phone #	Alternate Phone #	Consent/Denial Response			
E-mail					
UBI	Type				
EEs on site	EEs Covered	EEs in WA			
Name Employer Reps	Title	OC	WA	CC	
Name Employee Reps	Title	OC	WA	CC	
Employees interviewed <input type="checkbox"/> Yes <input type="checkbox"/> No		Union	Local #		
How many?		Address	Phone		
Opening Conference - Date: / / Time: _____			Closing Conference - Date: / / Time: _____		
<input type="checkbox"/> Explain WISH Act and DOSH	<input type="checkbox"/> Availability of standards, posters, logs		<input type="checkbox"/> Confidentiality of trade secrets		<input type="checkbox"/> Explain walk around procedure
<input type="checkbox"/> Request written programs	<input type="checkbox"/> Interview employees in private		<input type="checkbox"/> Discrimination against EEs		<input type="checkbox"/> Walk around pay
<input type="checkbox"/> Closing conference will be held	<input type="checkbox"/> Inquire of safety requirements for inspector		<input type="checkbox"/> Do you have minors (17 or under) working for you?		<input type="checkbox"/> Explain violations/penalties may result
<input type="checkbox"/> 300 Log copy collected	<input type="checkbox"/> State worksheet included <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Closing conference highlights included <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Complaint/referral provided <input type="checkbox"/> Yes <input type="checkbox"/> No

4418-046-000 Inspection Worksheet 1A 08-2013


Construction Crane Compliance Inspection

- Violations were found. Now what do I do?
- Rigging
- Crane
- Personnel
- Other safety provisions

Construction Crane Compliance Inspection

- Closing conference and what to expect:
- Schedule closing
- Discuss findings
- Propose citations

Division of Occupational Safety and Health
MS 44600

 **Inspection Worksheet (1A)**

Inspection #	COHO ID(s)	K9208	Credentialed personnel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date of Entry	Time of Entry
Business name	Consent Statement My name is <u>Bill</u> I am an Inspector for the State of Washington, Dept of Labor and Industries. I am here to conduct a health and/or workplace safety inspection (show ID credentials). May I have permission (or consent) to perform the inspection? If yes, proceed.				
Site Address	Employer Rep:				
Denied by:					
Mailing Address	If, and only if, the owner or his/her authorized representative does not affirmatively respond to the above requests for consent to inspect, the inspector will then state "Thank you, the state may seek a warrant for entry upon an inspection of the premises from a court of competent jurisdiction and such a warrant may be issued to permit me to conduct the inspection."				
Date/Time denied			Re-entry Date/Time		
Phone #	Alternate Phone #	Consent/Denial Response			
E-mail					
UBI	Type				
EEs on site	EEs Covered	EEs in WA			
Name	Title	OC	WA	CC	
Employer Reps					
Name	Title	OC	WA	CC	
Employee Reps					
Employees interviewed <input type="checkbox"/> Yes <input type="checkbox"/> No					
How many?	Union	Address	Local #	Phone	
Opening Conference - Date: / / Time: /			Closing Conference - Date: / / Time: /		
<input type="checkbox"/> Explain WISH Act and DOSH	<input type="checkbox"/> Availability of standards, posters, logs		<input type="checkbox"/> Confidentiality of trade secrets		<input type="checkbox"/> Explain walk around procedure
<input type="checkbox"/> Request written programs	<input type="checkbox"/> Interview employees in private		<input type="checkbox"/> Discrimination against EEs		<input type="checkbox"/> Walk around pay
<input type="checkbox"/> Closing conference will be held	<input type="checkbox"/> Inquire of safety requirements for inspector		<input type="checkbox"/> Do you have minors (17 or under) working for you?		<input type="checkbox"/> Explain violations/penalties may result
<input type="checkbox"/> 300 Log copy collected					
Shape sheet included <input type="checkbox"/> Yes <input type="checkbox"/> No			State worksheet included <input type="checkbox"/> Yes <input type="checkbox"/> No		Closing conference highlights included <input type="checkbox"/> Yes <input type="checkbox"/> No
					Complaint/referral provided <input type="checkbox"/> Yes <input type="checkbox"/> No

F414-046-000 Inspection Worksheet 1A 08-2013

Construction Crane Compliance Inspection

- I was cited. Now what happens?
- Appeal process options

Consultation

- I would like a crane consultation.
- www.lni.wa.gov/safety-health/preventing-injuries-illnesses/request-consultation/

High-Level Summary of Changes

Forklift being used as a crane

Operator evaluation

Duties of assigned personnel

Tower crane assembly, disassembly, and/or reconfiguration

2,000 pounds and under

Crane certifier certification

Crane certification worksheet/annual

Lift director qualifications

A/D director qualification

Rigger duties

Multi-tier rigging

Evaluation - Part L Draft

WAC 296-155-53300 Operator qualifications and certification.

- (3)(a) Through an evaluation, the employer must ensure that each operator is qualified by a demonstration of:
 - (i) The skills and knowledge, as well as the ability to recognize and avert risk, necessary to operate the equipment safely, including those specific to the safety devices, operational aids, software, and the size and configuration of the equipment. Size and configuration includes, but is not limited to: lifting capacity; boom length; attachments; luffing jib; and counterweight set-up;
 - (ii) The ability to perform the hoisting activities required for assigned work, including, if applicable, on rubber hoisting, pick and carry work, assembly/disassembly or reconfiguration work, blind lifts, personnel hoisting, and multi-crane/equipment lifts;
 - (iii) The ability to perform the duties as an A/D director, if the operator is expected perform the duties of an A/D director; and
 - (iv) The evaluation shall be based on all of the information from the operator's manual. Any additional requirements/language interpretations must be in writing from the manufacturer, or if the manufacturer is no longer available, an RPE must be used.

Duties of Assigned Personnel – Site Supervisor

WAC 296-155-53401(5) The site supervisor's duties include the following:

- (g) Ensuring that the assembly, disassembly work zone is adequate, and that access into the zone is controlled;
- Note: Subsection (n) will be altered as a result of the tower crane bill.
- (n) Notify the department by email at towercranenotify@Lni.wa.gov at least seven business days prior to having a tower crane assembled, disassembled, and/or reconfigured at the site. All of the following information shall be included in the email:
 - (i) Planned start and end date of the assembly, disassembly, and/or reconfiguration of the crane;
 - (ii) Job site address;
 - (iii) Type of work being performed, i.e. assembly, disassembly, and/or reconfiguration the tower crane; and
 - (iv) The names and contact numbers of all employers involved and their role in performing the work.
- (o) Display the name(s) of the site supervisor, A/D director, lift director(s), rigger(s), signal person(s), and the crane/equipment operator(s) for the job site. The display shall be conspicuously posted on the premises for the entire duration that any crane/equipment is on site. (This requirement shall not apply to a crane/equipment making a delivery while unloading that delivery.)

Duties of Assigned Personnel - Rigger

WAC 296-155-53401(8) Rigger added into the duties of assigned personnel:

The rigger(s) assigned to load handling activity duties include the following:

- (a) Ensuring the weight of the load and its approximate center of gravity have been obtained;
- (b) Selecting the proper rigging equipment, inspecting it, and complying with the applicable ASME B30 Volume (i.e., B30.9, B30.10, B30.20, B30.23, or B30.26) and applicable chapter 296-155 WAC, Part L, requirements;
- (c) Ensuring the rated load of the rigging equipment as selected and configured is sufficient for the load to be handled, based on the number of legs, hitch configuration and effects of angles;
- (d) Properly attaching the rigging equipment to the hook, shackle, or other load-handling device;
- (e) Ensuring that rigging equipment is adequately protected from abrasion, cutting, or other damage during load handling activities;

Duties of Assigned Personnel – Rigger (cont.)

- (f) Rigging the load in a manner to ensure balance and stability during the load handling activity;
- (g) Knowing and understanding the applicable signal for equipment in use;
- (h) Installing and using a tag line(s) when additional load control is required;
- (i) Ensuring that the load is properly rigged and balanced before it is lifted more than a few inches;
- (j) Ensuring that the load is properly stabilized and balanced before the weight is removed from the crane/equipment; and
- (k) Ensuring all loads are attached to the hook by means of suitable slings and/or other suitable devices of sufficient lifting capacity.

Duties of Assigned Personnel – A/D Director

WAC 296-155-53401(9) A/D director added into the duties of assigned personnel:

Qualifications:

- (a) Having the authority, and ensuring prompt corrective measures are taken, to eliminate hazards associated with the assembly, disassembly, and/or reconfiguration work;
- (b) Ensuring that WAC 296-155-53402 is followed;
- (c) Providing direct on-site supervision of all assembly, disassembly, and/or reconfiguration work;
- (d) Understanding and following the applicable assembly, disassembly, and/or reconfiguration procedures;

Duties of Assigned Personnel – A/D Director (cont.)

- (e) Creating an assembly/disassembly plan. This plan shall be in written or digital format, and remain on site for the entire duration that the crane is on site. The plan shall include at least the following:
 - (i) Date of meeting;
 - (ii) Names and signatures of all personnel, their role, and their responsibilities;
 - (iii) A sequence of operation detailing the assembly, disassembly, and/or reconfiguration, along with the components, the rigging, and capacity to be used in such operations;
 - (iv) A weight list and configuration of all assemblies and components proposed to be lifted;
 - (v) List of all assist cranes and their gross rated capacity;
 - (vi) The location and voltage information of all energized line(s) in the vicinity. (WAC 296-155-53408 shall also be followed);
 - (vii) The location and proposed timeline of the assembly, disassembly work zone;
 - (viii) Relevant weather warnings, and how to address them; and
 - (ix) Discuss disassembly issues or concerns found, and how to remedy them.

Tower Cranes

WAC-296-155-52902 Definitions.

- Assembly/disassembly work zone. Applicable to tower cranes. The total area that the crane/equipment, and/or components, and/or attachments could reach if the crane/equipment were to collapse during the assembly, disassembly, and/or reconfiguration of a tower crane. Height of the crane, length of boom, attachments, and loads shall all be considered in order to calculate the area, which can shrink or grow as the work progresses. Control access as necessary to restrict unauthorized access to the zone.
- **WAC 296-155-53401(1). Duties of assigned personnel.**
- For the assembly, disassembly, and/or reconfiguration work, the lift director and A/D director may not perform more than one of the listed duties found in the duties of assigned personnel section.

2,000 Pounds or Less

WAC 295-155- 53414 Cranes/equipment with a rated hoisting/lifting capacity of 2,000 pounds or less.

- (2) Prior to utilizing a crane/equipment inside of or on a multi-level building, the following must be reviewed and acknowledged as acceptable by a RPE:
 - (a) The engineering of the structural support of the crane/equipment;
 - (b) The methods to prevent the crane/equipment from inadvertently moving while hoisting a load; and
 - (c) The equipment base, structural supports, and connection points provide adequate support with applied torsional and overturning moments, and horizontal and vertical forces.

- Qualified riggers, lift director, and operator evaluation added.

Accreditation of Certifiers

WAC 296-155-53100 Accreditation of crane/equipment certifiers – Requirements.

- Crane certifier certification.
- A crane certifier would acquire the national certification, in conjunction with a singular Washington State test.
- Valid for a period of five years instead of the current three.

Worksheet/Annual Certificates

WAC 296-155-53114 Issuance of worksheet/annual certificates of operation.

- Crane certification annual/worksheet.
- Certifiers will provide a worksheet/crane annual certification which will then be verified and validated by the crane. certification program.

A/D Director Qualifications

WAC 296-155-53303 Assembly/disassembly director qualifications.

- A competent and qualified person, who may rely on qualified personnel to assist.
- Must pass a written test, which can be employer given or 3rd party. Qualification valid for 5 years.
- (a) Be capable of identifying existing and predictable hazards in the surroundings or working conditions of the assembly, disassembly, and/or reconfiguration work which are hazardous, or dangerous to employees;
- (b) Have knowledge of applicable chapter 296-155 WAC, Part L, requirements regarding relevant crane assembly, disassembly, and/or reconfiguration procedures;
- (c) Have knowledge of manufacturer's instructions, warnings, precautions and prohibitions regarding the assembly, disassembly, and/or reconfiguration of the specific crane being assembled, disassembled, and/or reconfigured;
- (d) Know and fulfill the relevant duty requirements of WAC 296-155-53401(9) and this section; and
- (e) Demonstrate that they meet the requirements in (a) through (d) of this subsection through an oral or written test. All tests must be documented.

Multi-Tier Rigging (part 1)

WAC 296-155-55600 General requirements.

- (a) Multi-tier rigging is only permitted when all of the following criteria are met:
 - (i) Only employees essential to the operation are allowed to be in the fall zone, but must keep clear of loads and never be directly under the suspended load;
 - (ii) All employees engaged in the multi-tier rigging must be made aware of and understand the additional hazards imposed by multi-tier rigging, and will avoid the associated hazards;
 - (iii) A maximum of 3 tiers are hoisted per lift;
 - (iv) Slings are protected with material of sufficient strength, thickness, and construction to prevent damage from sharp edges, corners, protrusions, or abrasive surfaces;
 - (v) Hooks with self-closing latches or their equivalent must be used.

Multi-Tier Rigging (cont.)

- (b) The total load must not exceed:
 - (i) The rated capacity of the hoisting equipment specified in the hoisting equipment load charts;
 - (ii) The rigging capacity specified in the rigging-rating chart.
- (c) The multi-tier rigging assembly must be rigged:
 - (i) Appropriately rigged and maintained reasonably level;
 - (ii) Rigged from the top down; and
 - (iii) Rigged with enough space for at least 7 feet apart from each load.
- (d) As each load is landed, the remaining loads must be swung off to the side prior to disconnecting the landed load.
- (e) Controlled load lowering must always be used.
- (f) Loads shall be landed on a stable surface to prevent movements causing hazards such as crush/pinch points.
- (g) The only type of basket hitch that may be used, is a double wrapped basket hitched.



Thank you!

Bill Sloniker – Crane Technical Specialist

206-715-3287

SLON235@LNI.WA.GOV

Jim Rone – Region 8 Compliance Manager

360-481-9243

RONJ235@LNI.WA.GOV

Matthew Ludwick – Deputy Statewide Compliance Manager

360-902-5525

LUDN235@LNI.WA.GOV

Jeff Kensinger – Region 8 Crane Compliance Supervisor

206-588-9757

KEJI235@LNI.WA.GOV

