



Washington State Department of
Labor & Industries



Crane Certification Operator Requirements for Construction Work



**Larry Markee, Crane Technical Specialist
Department Of Labor and Industries
Division of Occupational Safety and Health**





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Cranes Included

Equipment Excluded

Crane Certification

Crane Operator Qualifications

Crane Certifier Accreditation



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What's Included ?

This rule applies to power-operated cranes and derricks used in construction that can hoist, lower and horizontally move a suspended load (with or without attachments). Such equipment includes, but is not limited to:



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Mobile Cranes





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Rough-Terrain Cranes





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Hydraulic Boom Truck Cranes





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Carry-Deck Cranes





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Lattice Boom Truck Cranes





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Crawler Cranes





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Tower Cranes





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Articulating Boom Cranes



Operator certification



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Derricks





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Dedicated Pile Drivers





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What's Excluded ?

**The following equipment is exempt from
Annual Crane certification
&
Operator Certification**



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Exempt

**Mechanic's
truck when
used for
equipment
maintenance
or repair
work**





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Certification Not Required

**Cranes with
a maximum
capacity of
one ton or
less.**

**Service
trucks with
booms that
rotate
manually**





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Power Shovels





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Excavators





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Backhoes





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Telehandlers / Forklifts





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**Machines with booms that
are limited to up & down
movement only and does
not rotate**



**Pump hoists
with booms
that do not
rotate**





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Conveyors





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Crane & Operator Certification Not Required When.....



**Used in manufacturing facilities or powerhouses
while used in routine maintenance and repair work**



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Crane Certification Requirements

Mobile Articulating Overhead Derricks *Tower

Annually Inspection

Certification

Proof Load Test:

*annual certification
after each assembly
jumping, etc.)



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Certification Requirements

Quadrennial Proof Load Test / Annual
Inspection

Crane Components, such as Boom Sections,
Back Mast Sections, Luffing Booms, Jibs,
Jib Sections



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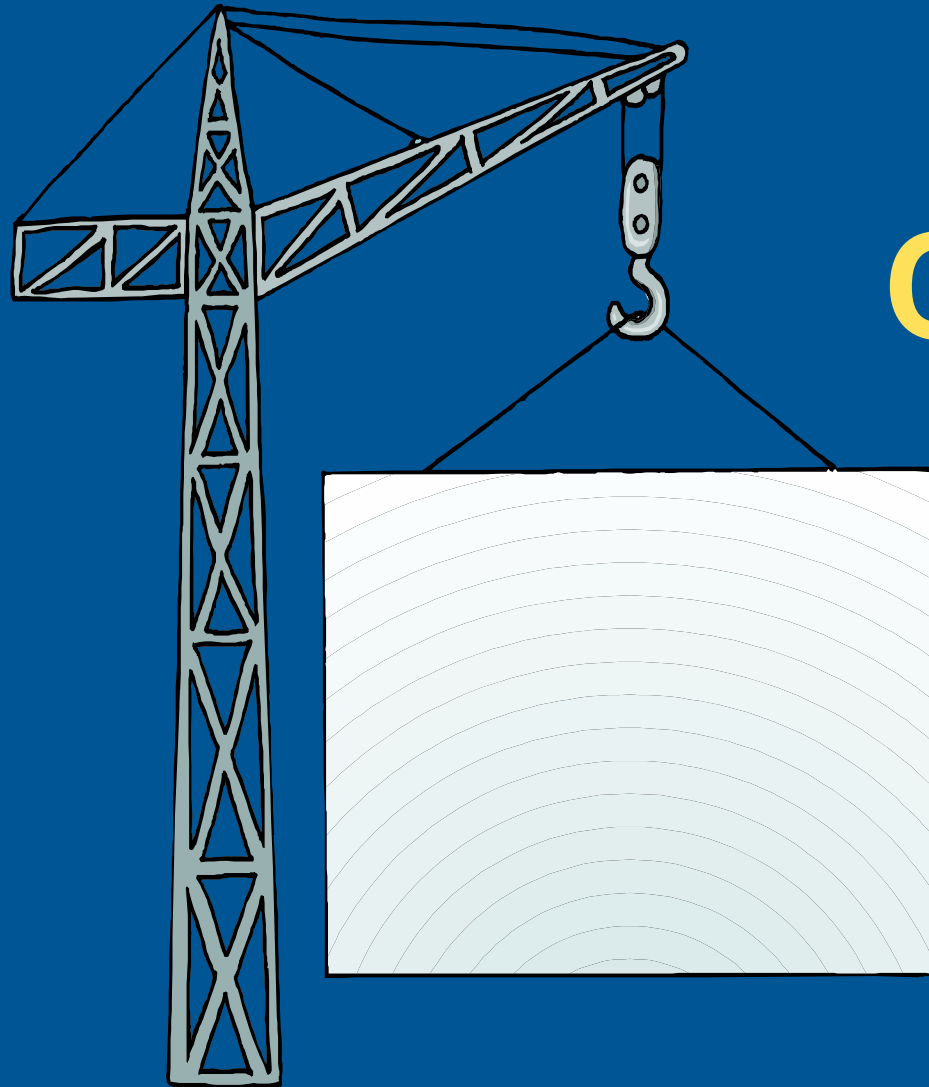
Additional Tower Crane Certification Requirements

Annual Inspection, Certification, & Proof Load Test
&

Tower cranes and tower crane assembly parts must be inspected by the crane certifier, prior to assembly and following erection of the tower crane, after each climbing operation, or reconfiguring the boom, jib, or counterjib before placing the crane in service.



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Crane Certification



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Accredited Construction Crane Certifiers

Currently
57
Certifiers

Mobile	54
Tower	16
Articulating	35
Overhead	32

CONSTRUCTION CRANE CERTIFIERS

T - Indicates TOWER CRANE ACCREDITED
M - Indicates MOBILE CRANE AND DERRICK ACCREDITED
O - Indicates OVERHEAD CRANE ACCREDITED
A - Indicates ARTICULATING CRANE ACCREDITED

ARXCIS INC. – (T/M/O/A)

PO BOX 689
 KINGSTON WA 98346-0689
 PHONE 360-297-3693 or 206-343-3459
 FAX 360-297-8388
info@arxcis.com

STEVEN E. BRADLEY – (O)

PO BOX 13157
 MILLCREEK WA 98082
 PHONE 425-418-8308
bradley.steve@verizon.net

BRODEK CRANE INSPECTIONS – (M)

PO BOX 7089
 CHANDLER AZ 85226
 (480) 732-1369
ron@brodekcrane.com

CRANE AMERICA – (M/O/A)

2903 NE 109TH AVENUE SUITE A
 VANCOUVER WA 98682
 PHONE 360-256-6385
 FAX 360-256-6638
casportland@craneamerica.com

LAST UPDATED 12/2009

RICK M. DAVIS – (M)

1008 LAMBERT COURT
 CLARKSTON WA 99403
 PHONE 509-758-8818
kpd@lewiston.com

DELCON CRANE CERTIFICATORS INC – (M/O/A)

PO BOX 2727
 KIRKLAND WA 98083
 PHONE 800-800-4913
delconcrane@live.com

EAGLEDALE HOIST & DRAY – (M/O/A)

5432 NEW SWEDEN AVENUE
 BAINBRIDGE ISLAND WA 98110
 PHONE/FAX 206-842-3051
 CELL 206-300-8201
waltballcranes@msn.com

KENT CRANE INSPECTION SERVICES – (T/M/O/A)

4811 SOUTH 150TH STREET
 TUKWILA WA 98188
 PHONE 206-321-1806
 FAX 206-439-6816
randy.kent@kentengineering.com

MARINE SURVEYORS & CONSULTANTS (M/O/A)

PO BOX 22123
 SEASIDE WA 98138


<http://www.lni.wa.gov/Safety/Topics/AtoZ/Cranes/files/ConstructionCraneCertifiers.pdf>



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Crane / Component Identification Sticker

Labor and Industries Crane Certification Program		CRANE/COMPONENT ID# C 7054321
Name of Owner	Sky-High Cranes INC.	
Manufacturer	Morr-Gra	
Model #	57 M-G C	
Serial #	04191952 G-M	
Owner's Equip ID #	Sky-High # 42	
Component Name	Boom Tip	
DO NOT REMOVE OR DESTROY THIS LABEL		
F447-026-000 crane id 05-2008		



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Temporary certificate of operation.

Accredited crane certifiers will issue a temporary certificate of operation if upon inspection and load proof testing no deficiencies were found that would affect the safe operation of the crane.
WAC 296-155-53114 (1)

A copy of the crane worksheet, completed by the accredited certifier will act as a temporary certificate of operation until the annual certificate of operation is issued by the Department.

The temporary or annual certificate of operation must be posted in the operator's cab or with the operator's manual.
WAC 296-155-53114 (7)

Department of Labor and Industries
Division of Occupational Safety & Health
700 Box 44650
Olympia WA 98544-4650 Office: (360) 592-4942
Email: LINCranes@dc.la.wa.gov Fax: (360) 902-5428

Mobile Cranes/Derricks Worksheet for Construction Industry

Name of Owner (Not Lessee) Permanent Sticker ID #
BELLES TOW CRANE SERVICE C0800002
Inspection Exp. Date Proof Load Test Exp. Date
3/3/10 5/3/10

Address City State Zip+4 Send Certification to this address
833 SIRIUS LANE OLYMPIA WA 98508

Is this Crane Leased or Rented Yes No If Yes, Write Lessee's Name and Address below: Send Certification to this address

Description: Lattice Boom Hydraulic Boom Articulating Boom Derrick Other _____ Owner's ID # 14

Manufacturer Linkbelt Max Rated Capacity in Lbs Model Number Serial Number Hour Meter Reading
200,000 LBS BC-218A 18117-839B 99.01

Site Address City State Zip+4
833 SIRIUS LANE, BLDG 12 CHEHALIS WA 99999

Boom Length at Time of Inspection If Derrick, state type, Breast, Stiff Leg, A-Frame, etc.
Main Hoist: 110' Whip: 140' N/A

Wire rope	No. Parts	Diameter	No. Strands	Wires per Strand	Type Core	Break Strength	Attach Mfg. Cert. of Wire Rope:
Main Hoist	4	7/8"	6	26	IWRC	89.80	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Whip	1	7/8"	6	26	IWRC	89.80	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Boom	2x3	5/8"	6 (A.L.T.)	26 (A.L.T.)	IWRC	17.9	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Boom Pendants	2x3	1 3/8"	6	26	IWRC	83.5	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

The following items must be inspected where applicable. If not applicable, so indicate.

	Accept	Reject	N/A	Accept	Reject	N/A
a) Boom	X			p) Brakes	X	
b) Boom Extensions, Jib	X			q) Controls / Functions / Labeled	X	
c) Boom Sheaves	X			r) Electrical Equipment	X	
d) Fire Extinguisher	X			s) Ladders, Hand Guards, Rails, Windows	X	
e) Fluid Levels	X			t) Gauges working	X	
f) Fluid Leaks	X			u) Data plates / warning signs, decals	X	
g) Guards	X			v) Housekeeping	X	
h) Hoist Drum	X			w) Lights / Signals / Horn	X	
i) Hook(s)	X			x) Limit Switches	X	
j) Outriggers, Stabilizers, Pads	X			y) Pennant Bars / Cables and Links	X	
k) Structural Welds	X			z) Load Chucks and Operator's Manual	X	
l) Rotation Bearing	X			aa) Operational Aids	X	
m) Wire Rope Baskets, Pins	X			bb) Hook and Load Riggers	X	
n) Anti-Two-Block Device	X			cc) Chains, Tires, Steering	X	
o) Backup Alarm	X			dd) Swivel Lock and Brakes	X	

TEST REQUIREDS: Proof load test for cranes must be based on manufacturer's load ratings and must be at least 100% but not to exceed 110% of the rated capacity. Derricks must be proof load tested in excess of safe working load: for capacities up to 20 tons = proof load 25% in excess; 20 tons to 50 tons = Proof load 5 tons in excess; over 50 tons = 10% in excess.

Radius In feet	Boom Angle plus degrees	Rated Capacity		Test Load		Load Test %	Main or Whip	Crane Configuration & Test Range
		Tons	Lbs.	Tons	Lbs.			
90'		14300	8	16000	112%	Main	OVER FRONT 180 DEGREES	
100'		12400	7	14000	112%	Whip	OVER REAR LIMITED SWING	

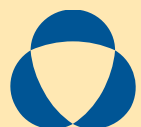
Means of Application of Proof Load Test certifier Test Weights Other _____ Basis for Assigned Load Rating Designate Owner (operator) Manufacturer

Remarks:

I hereby certify the above tests and/or examinations have been conducted in accordance with the Washington State Safety Standards for Construction Operations, WAC 296-155. A copy of this worksheet will be used as a temporary certificate until the annual certification is issued. This temporary certificate is valid for 30 days after the date of this inspection.

Date: 3/4/09 Accredited Certifier's Name (please print) Accredited Certifier's ID #
ROGER DODGER 4444
Certifier's Phone # Signature of Accredited Certifier Address
888-599-5999 Roger E. Dodger DE SAFE CRANE, 2 PARK BL SEATTLE, WA 98109

D416-043-000 Construction Mobile Crane Worksheet - 10-08 Distribution: White - L&I Crane Safety Program; Green - Certifier; Pink - Owner/Lessee



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Annual Test/Examination Certificate

Certificates of operation issued by the department under the crane certification program established in this section are valid for one year from the effective date of the temporary operating certificate issued by the certified crane inspector.

The annual certificate of operation must be posted in the operator's cab or with the operator's manual

WAC 296-155-53114(7)

Department of Labor and Industries
Division of Occupational Safety & Health
PO Box 44650
Olympia WA 98504-4650
(360) 302 4943



ANNUAL TEST/EXAMINATION CERTIFICATE

Date of Issue 01/04/2010

COAST CRANE/PASCO
525 S OREGON AVE
PASCO, WA 99301

Certificate Expiration Date
12/21/2010

CRANE ID# C0005936

OWNER'S ID# BT133

Certified for "On Rubber" Use: No

Location:
525 S OREGON AVE
PASCO 99301

Model #: 800D

Crane Type: MOBILE
Maximum Capacity: 46000.00 LBS.

Serial #: 291139
Manufacturer: NATIONAL

The Department of Labor and Industries, Division of Occupational Safety & Health certifies that any deficiencies considered to constitute an unsatisfactory condition have been corrected and that the device was tested and examined by the certified inspector and that said test and examination met with the requirements specified in WAC 296-155

CERTIFIED BY: GARY NEAL

EMPLOYER: COAST CRANE COMPANY/ WA

CERTIFIER ID #: 104306

IN ACCORDANCE WITH WAC 296-56, 304 or 155, THIS CERTIFICATE SHALL BE POSTED IN OPERATORS CAB OR AT OPERATORS WORK STATION.

Components inspected with this crane are listed on the following page(s).



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Certified Construction Cranes

- § Certified Cranes 1456
- § Mobile 1195
- § Articulating 178
- § Tower 51
- § Derrick 1
- § Overhead 31

» 3/19/2010



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Construction Crane Operators Qualifications & Requirements





Operator Qualifications & Certification

- § The crane operator must:
- § Have a valid crane operator certificate, for the type of crane to be operated, issued by a crane operator testing organization accredited by a nationally recognized accrediting agency; and
- § Has crane hours of experience ; and
- § Passed a substance abuse test conducted by a recognized laboratory.

» WAC 296-155-53300(1)(a)



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Accredited Crane Operator Testing Organizations

- § National Commission for the Certification of Crane Operators (NCCCO) <http://nccco.org/>
- § Crane Institute of America Certification (CIC) <http://www.craneinstitutecertification.com/>
- § National Center for Construction Education and Research (NCCER) <http://www.nccer.org/>
- § Operating Engineers Certification Program
(formerly the Southern California Crane & Hoisting Certification Program)
<http://www.iuoe.org/Training/Local12Training/tabid/141/Default.aspx>



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Crane Operator Qualification Requirements

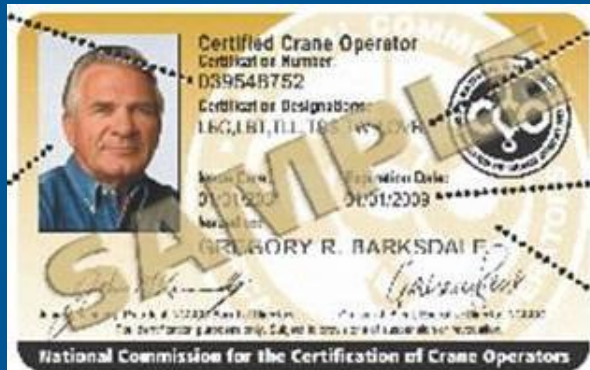
- Crane operators must recertify at least every 5 years



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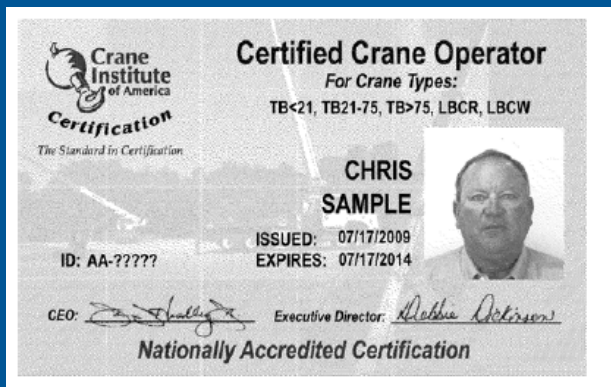
Crane Operator Testing Originations



National Commission for the
Certification of Crane Operators



National Center for Construction
Education and Research



Crane Institute of America Certification



Local 12, The International Union
of Operating Engineers.



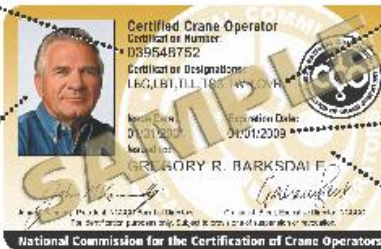
Crane Operator Certification Card

CCO Certification Card FACT SHEET

Certification Number:
Look for an eight (8)
to nine (9) digit
Certification Number

Color Photo:
Look for photo embedded
in laminated card

FRONT OF CERTIFICATION CARD



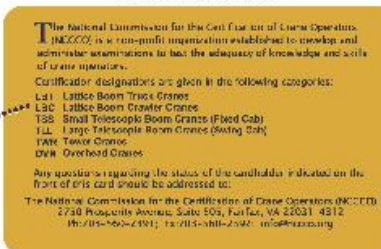
Certification Designations:
This area specifies what
categories of crane the
individual is certified in

Issue and Expiration Dates:
These dates tell you if the
certification card is valid

NCCCO Logo:
Look for the ghosted logo
and shading on the card

BACK OF CERTIFICATION CARD

Certification Code:
On the back of the card
is an explanation of each
certification category code



Verification:
If you have questions regard-
ing the status of a candidate,
please verify with our office
using the contact info here

IMPORTANT

- NCCCO Certification Card is valid only in conjunction with a current DOT or NCCCO Medical Certificate
- Verify certification is current and in the appropriate crane categories
- Check card for irregularities
- Never accept a photocopy of a CCO card as proof of certification
- Contact NCCCO if in doubt!



09/08



Crane Categories and Types

LBT- Lattice Boom Truck Crane

LBC- Lattice Boom Crawler Crane

TLL- Large Telescopic Boom Crane (**Swing Cab**)

TSS- Small Telescopic Boom Crane (**Fixed Cab**)

TOW- Tower Crane

OVR- Overhead Crane



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Lattice Boom Cranes

Truck Mounted

Crawler





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Large Telescopic Boom Crane (Swing Cab)





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Small Telescopic Boom Crane (Fixed Cab)





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Articulating Cranes



Note: NCCCO has completed written and practical exams for articulating cranes.



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Derrick

**Derrick
Operators
must have a
Lattice Boom
Certification**





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Tower Cranes

Hammerhead

Luffing

Self-Erecting





Crane Operator Hours of Experience Table 1

Crane Operator Experience for Cranes Used in the Construction Industry
Table 1

The 5 Categories of Cranes and their Types	Number of Hours of Actual Crane Operating Experience	Number of Hours of Crane Related Experience
(1) Mobile Cranes		
(a) Lattice Boom Crawler Cranes (LBC)	300 tons and above 1000 Hours	300 tons and above 1000 Hours
	Under 300 tons 500 Hours	Under 300 tons 500 Hours
(b) Lattice Boom Truck Cranes (LBT)	300 tons and above 1000 Hours	300 tons and above 1000 Hours
	Under 300 tons 500 Hours	Under 300 tons 500 Hours
(c) Large Telescopic Boom Cranes (Swing Cab) (TLC)	Over 130 tons 750 Hours	Over 130 tons 750 Hours
	Over 40 tons to 130 tons 250 Hours	Over 40 tons to 130 tons 250 Hours
	40 tons and under 40 Hours	40 tons and under 40 Hours
(c) Small Telescopic Boom Cranes (Fixed Cab) (TSS)	15 tons and above 40 Hours	15 tons and above 40 Hours
	Over 5 tons to 15 tons 20 Hours	Over 5 tons to 15 tons 20 Hours
	5 tons and under 8 hours	5 tons and under 16 hours
(2) Articulating Boom Cranes	20 Hours	20 Hours
(2) Tower Cranes		
(a) Hammerhead	500 Hours	500 Hours
(b) Luffcr	500 Hours	500 Hours
(c) Self-Erecting	50 Hours	50 Hours
(4) Overhead Cranes		
(a) Cab Operated	40 Hours	40 Hours
(b) Pendant/Remote	40 Hours	40 Hours
(5) Derricks	20 Hours	500 Hours

Hours of actual crane operating experience: For all cranes: Time while the operator is at the controls of the crane and/or has direct control of the crane and/or a combination of operating beams within the same crane type. For mobile cranes: It also includes time while installing/removing boom sections, luffing boom, etc., extending and retracting outriggers/stabilizers, leveling crane, and replacing hoisting rope. For tower cranes: It includes time while jacking/freeing the height of the tower/truss.

Note: Additional actual crane operator experience may accrue for crane related experience. Hours of crane related experience: Time as a signaller/bellman, other crane mechanic, crane inspector, formal classroom training, crane simulator operation, and a combination of operating hours in other categories of cranes.



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Crane Related Safety Inspections

43 Safety Inspections



The New Construction Crane Rule

Crane rule status

- Phase One:
 - Crane Certification
 - Crane Certifiers
 - Operator Qualifications
- Phase Two:
 - Similar to the OSHA Proposal
 - Training, Assembly/Disassembly,
 - Signals, Inspections, Maintenance,
 - Operations.....



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Questions?

Contact:

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(360) 902-4553**

Mala235@lni.wa.gov

