



# RULE-MAKING ORDER

**CR-103P (May 2009)**  
**(Implements RCW 34.05.360)**

**Agency:** Department of Labor and Industries

**Permanent Rule Only**

**Effective date of rule:**

**Permanent Rules**

31 days after filing.

Other (specify) February 1, 2012 (If less than 31 days after filing, a specific finding under RCW 34.05.380(3) is required and should be stated below)

**Any other findings required by other provisions of law as precondition to adoption or effectiveness of rule?**

Yes  No If Yes, explain:

**Purpose:**

This rule is to address the requirements that employers must follow with regard to inspection, maintenance and operation of cranes used in the construction industry. This rule also includes updates to our current rigging and personnel lifting requirements. RCW 49.17.400 through 49.17.440 requires the department to establish by rule a crane certification program for cranes used in the construction industry and to establish requirements that must be met to be considered a qualified crane operator. In addition, the Occupational Safety and Health Administration (OSHA) adopted their final rule and this rule also includes requirements OSHA has in their rule in order for the Division of Occupational Safety and Health (DOSH) to be at least as effective as the federal rule. See attachment 1.

This rule was developed with the assistance of a stakeholder group from the industry representing business and labor.

**Citation of existing rules affected by this order: See attachment 1.**

Repealed: 52

Amended: 25

Suspended: 0

**Statutory authority for adoption:** RCWs 49.17.010, 49.17.040, 49.17.050, 49.17.440 and 49.17.060.

**Other authority :** 29 CFR 1926, Subpart CC, Cranes and Derricks in Construction

**PERMANENT RULE (Including Expedited Rule Making)**

Adopted under notice filed as WSR 11-16-022 on July 26, 2011.

Describe any changes other than editing from proposed to adopted version:

See attachment 2.

If a preliminary cost-benefit analysis was prepared under RCW 34.05.328, a final cost-benefit analysis is available by contacting:

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**Date adopted:**

December 20, 2011

**NAME (TYPE OR PRINT)**

Judy Schurke

**SIGNATURE**

**TITLE**

Director

**CODE REVISER USE ONLY**

OFFICE OF THE CODE REVISER  
STATE OF WASHINGTON  
FILED

**DATE: December 20, 2011**

**TIME: 9:21 AM**

**WSR 12-01-086**

(COMPLETE REVERSE SIDE)

**Note: If any category is left blank, it will be calculated as zero.  
No descriptive text.**

**Count by whole WAC sections only, from the WAC number through the history note.  
A section may be counted in more than one category.**

**The number of sections adopted in order to comply with:**

<b>Federal statute:</b>	New	_____	Amended	_____	Repealed	_____
<b>Federal rules or standards:</b>	New	99	Amended	25	Repealed	52
<b>Recently enacted state statutes:</b>	New	_____	Amended	_____	Repealed	_____

**The number of sections adopted at the request of a nongovernmental entity:**

New	99	Amended	25	Repealed	52
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**The number of sections adopted in the agency's own initiative:**

New	99	Amended	25	Repealed	52
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**The number of sections adopted in order to clarify, streamline, or reform agency procedures:**

New	99	Amended	25	Repealed	52
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**The number of sections adopted using:**

<b>Negotiated rule making:</b>	New	_____	Amended	_____	Repealed	_____
<b>Pilot rule making:</b>	New	_____	Amended	_____	Repealed	_____
<b>Other alternative rule making:</b>	New	_____	Amended	_____	Repealed	_____

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**NEW SECTIONS:**

**WAC 296-155-53302 Signal person qualifications.**

- Requirements relating to signal person qualifications are located in this section. These requirements were federally-initiated except for subsection (4), this subsection is state-initiated.

**WAC 296-155-53304 Repair, inspection, and maintenance employee qualifications.**

- Requirements relating to repair, inspection and maintenance employee qualifications are located in this section. These requirements were federally-initiated.

**WAC 296-155-53306 Rigger qualifications.**

- Requirements relating to rigger qualifications are located in this section. These requirements were state-initiated.

**WAC 296-155-534 General requirements for all cranes and derricks.**

- There are no requirements in this section.

**WAC 296-155-53400 General requirements.**

- Requirements relating to general requirements applying to all cranes and derricks are located in this section. Most of these requirements in this section were either federally-initiated, were in current rule or were in an industry national consensus standard.

**WAC 296-155-53401 Duties of assigned personnel.**

- Requirements relating to the duties of assigned personnel are located in this section. These requirements were from an industry consensus standard.

**WAC 296-155-53402 Assembly/disassembly.**

- Requirements relating to the assembly/disassembly of cranes and derricks are located in this section. These requirements were federally-initiated and state-initiated.

**WAC 296-155-53403 Fall protection.**

- Requirements relating to fall protection while operating cranes and derricks are located in this section. These requirements were either federally-initiated or were in current rule.

**WAC 296-155-53404 Wire rope.**

- Requirements relating to the use of wire rope when used with cranes and derricks are located in this section. These requirements were federally-initiated.

**WAC 296-155-53405 Inspections.**

- Requirements relating to the inspection of cranes and derricks are located in this section. These requirements were federally-initiated.

**WAC 296-155-53406 Signals.**

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- Requirements relating to signals while operating cranes and derricks are located in this section. These requirements were federally-initiated or were in an industry consensus standard.

**WAC 296-155-53408 Power line safety.**

- Requirements relating to power line safety while operating cranes and derricks are located in this section. These requirements were federally-initiated or were in current rule.

**WAC 296-155-53409 Training.**

- Requirements relating to training are located in this section. These requirements were federally-initiated.

**WAC 296-155-53410 Safety devices.**

- Requirements relating to safety devices required on all cranes and derricks are located in this section. These requirements were federally-initiated.

**WAC 296-155-53412 Operational aids.**

- Requirements relating to operational aids are located in this section. These requirements were federally-initiated.

**WAC 296-155-53414 Cranes/derricks with a rated hoisting/lifting capacity of two thousand pounds or less.**

- Requirements relating to cranes/derricks with a maximum manufacturer-rated hoisting/lifting capacity of 2,000 pounds or less are located in this section. These requirements were federally-initiated.

**WAC 296-155-537 Mobile cranes.**

- There are no requirements in this section.

**WAC 296-155-53700 Mobile cranes – General.**

- General requirements relating to mobile cranes are located in this section. These requirements were federally-initiated or were in an industry consensus standard.

**WAC 296-155-53715 Mobile cranes – Operations.**

- Operational requirements relating to mobile cranes are located in this section. These requirements were either federally-initiated, state-initiated or were in an industry consensus standard.

**WAC 296-155-538 Articulating boom cranes.**

- There are no requirements in this section.

**WAC 296-155-53800 Articulating boom cranes – General.**

- General requirements relating to articulating boom cranes are located in this section. These requirements were federally-initiated or were in an industry consensus standard.

**WAC 296-155-53815 Articulating boom cranes – Operations.**

- Operational requirements relating to articulating boom cranes are located in this section. These requirements were federally-initiated or were in an industry consensus standard.

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**WAC 296-155-539 Tower cranes.**

- There are no requirements in this section.

**WAC 296-155-53900 Tower cranes – General.**

- General requirements relating to tower cranes are located in this section. These requirements were either federally-initiated, state-initiated, or were in current rule or were in an industry consensus standard.

**WAC 296-155-53905 Tower cranes – Additional inspection criteria.**

- Additional inspection criteria requirements relating to tower cranes are located in this section. These requirements were federally-initiated.

**WAC 296-155-53915 Tower cranes – Operations.**

- Operational requirements relating to tower cranes are located in this section. These requirements were federally-initiated or were in an industry consensus standard.

**WAC 296-155-541 Self-erecting tower cranes.**

- There are no requirements in this section.

**WAC 296-155-54100 Self-erecting tower cranes – General.**

- General requirements relating to self-erecting tower cranes are located in this section. These requirements were state-initiated.

**WAC 296-155-54115 Self-erecting tower cranes – Operations.**

- Operational requirements relating to self-erecting tower cranes are located in this section. These requirements were state-initiated.

**WAC 296-155-542 Overhead/Bridge and gantry cranes.**

- There are no requirements in this section.

**WAC 296-155-54200 Overhead/Bridge and gantry cranes – General.**

- General requirements relating to overhead/bridge and gantry cranes are located in this section. These requirements were federally-initiated.

**WAC 296-155-54215 Overhead/Bridge and gantry cranes – Operations.**

- Operational requirements relating to overhead/bridge and gantry cranes are located in this section. These requirements were state-initiated or were in an industry consensus standard.

**WAC 296-155-543 Derricks.**

- There are no requirements in this section.

**WAC 296-155-54300 Derricks – General.**

- General requirements relating to derricks are located in this section. These requirements were federally-initiated or state-initiated.

**WAC 296-155-54305 Derrick – Construction.**

- Requirements relating to the construction of derricks are located in this section. These requirements were federally-initiated or state-initiated.

**WAC 296-155-54320 Derricks – Operations.**

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- Operational requirements relating to derricks are located in this section. These requirements were federally-initiated or state-initiated.

**WAC 296-155-544 Additional requirements for other types of cranes/derricks.**

- There are no requirements in this section.

**WAC 296-155-54400 Floating cranes/derricks and land cranes/derricks on barges.**

- Requirements relating to floating cranes/derricks and land cranes/derricks on barges are located in this section. These requirements were federally-initiated.

**WAC 296-155-54405 Dedicated pile drivers.**

- Requirements relating to dedicated pile drivers are located in this section. These requirements were federally-initiated.

**WAC 296-155-54410 Sideboom cranes.**

- Requirements relating to sideboom cranes are located in this section. These requirements were federally-initiated.

**WAC 296-155-547 Personnel lifting platforms (attached and suspended) – Scope.**

- This section is the scope and application of lifting personnel. This section was federally-initiated.

**WAC 296-155-548 Design and installation requirements for personnel lifting systems.**

- There are no requirements in this section.

**WAC 296-155-54800 Design of platforms and suspension systems.**

- Requirements relating to the design of platforms and suspension systems are located in this section. These requirements were either federally-initiated, state-initiated or were in an industry consensus standard.

**WAC 296-155-549 Personnel lifting hoisting equipment.**

- There are no requirements in this section.

**WAC 296-155-54900 Crane or derrick requirements for personnel lifting.**

- Requirements relating to the use of cranes or derricks for personnel lifting are located in this section. These requirements were either federally-initiated, state-initiated or were in an industry consensus standard.

**WAC 296-155-551 Inspections, maintenance and testing.**

- There are no requirements in this section.

**WAC 296-155-55100 Inspections on cranes and personnel platforms.**

- Requirements relating to the inspection on cranes and personnel platforms are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-55105 Adjustments and repairs on personnel platforms.**

- Requirements relating to the adjustments and repairs on personnel platforms are located in this section. These requirements were federally-initiated and were in an industry consensus standard.

**WAC 296-155-55110 Proof load test platforms and rigging.**

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- Requirements relating to the proof load testing of platforms and rigging are located in this section. These requirements were federally-initiated.

**WAC 296-155-55115 Trial lift.**

- Requirements relating to the trial lift are located in this section. These requirements were federally-initiated.

**WAC 296-155-552 Employer responsibilities.**

- There are no requirements in this section.

**WAC 296-155-55200 Employer responsibilities for lifting personnel.**

- Requirements relating to the employer responsibilities for lifting personnel are located in this section. These requirements were federally-initiated and state-initiated.

**WAC 296-155-55205 Responsibilities of the personnel lift supervisor.**

- Requirements relating to the responsibilities of the personnel lift supervisor are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-55210 Crane or derrick operation requirements for personnel lifting.**

- Requirements relating to the crane or derrick operation for personnel lifting are located in this section. These requirements were either federally-initiated, state-initiated or were in an industry consensus standard.

**WAC 296-155-553 Lifting personnel.**

- This requirement is federally-initiated.

**WAC 296-155-55300 Personnel lifting requirements.**

- Personnel lifting requirements are located in this section. These requirements were either federally-initiated, state-initiated or were in an industry consensus standard.

**WAC 296-155-55305 Lifting personnel near electrical power lines.**

- Requirements relating to lifting personnel near electrical power lines are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-554 Boatswain's chairs.**

- There are no requirements in this section.

**WAC 296-155-55400 Use boatswain's chairs as a last resort.**

- Requirements relating to using boatswain's chairs are located in this section. These requirements were federally-initiated or were in current rule.

**WAC 296-155-55405 Lifting personnel using a boatswain's chair.**

- Additional requirements relating to using boatswain's chair are located in this section. These requirements were federally-initiated or were in current rule.

**WAC 296-155-556 Rigging – General requirements.**

- There are no requirements in this section.

**WAC 296-155-55600 General requirements.**

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- General requirements relating to all rigging are located in this section. These requirements were either in the current federal rule, current state rule or were in an industry consensus standard.

**WAC 296-155-558 Slings.**

- There are no requirements in this section.

**WAC 296-155-55800 Chain slings.**

- Requirements relating to chain slings are located in this section. These requirements were either in the current federal rule, current state rule or were in an industry consensus standard.

**WAC 296-155-55805 Wire rope slings.**

- Requirements relating to wire rope slings are located in this section. These requirements were either in the current federal rule, current state rule or were in an industry consensus standard.

**WAC 296-155-55810 Metal mesh slings.**

- Requirements relating to metal mesh slings are located in this section. These requirements were either in the current federal rule, current state rule or were in an industry consensus standard.

**WAC 296-155-55815 Synthetic rope slings.**

- Requirements relating to synthetic rope slings are located in this section. These requirements were either in current federal rule, current state rule or were in an industry consensus standard.

**WAC 296-155-55820 Synthetic webbing slings.**

- Requirements relating to synthetic webbing slings are located in this section. These requirements are either in current federal rule, current state rule or are in an industry consensus standard.

**WAC 296-155-55825 Synthetic roundslings.**

- Requirements relating to synthetic roundslings are located in this section. These requirements were either in federal rule, current state rule or were in an industry consensus standard.

**WAC 296-155-561 Rigging hardware.**

- There are no requirements in this section.

**WAC 296-155-56100 General requirements.**

- General requirements relating to rigging hardware are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-56105 Shackles.**

- Requirements relating shackles are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-56110 Adjustable hardware.**

- Requirements relating to adjustable hardware are located in this section. These requirements were in an industry consensus standard.

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**WAC 296-155-56115 Compression hardware.**

- Requirements relating to compression hardware are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-56120 Links, rings, and swivels.**

- Requirements relating to links, rings, and swivels are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-56125 Rigging blocks.**

- Requirements relating to rigging blocks are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-562 Lifting devices other than slings and rigging hardware.**

- There are no requirements in this section.

**WAC 296-155-56200 Structural and mechanical lifters.**

- Requirements relating to structural and mechanical lifters are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-56205 Vacuum lifters.**

- Requirements relating to vacuum lifters are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-56210 Close proximity lifting magnets.**

- Requirements relating to close proximity lifting magnets are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-56215 Remotely operated lifting magnets.**

- Requirements relating to remotely operated lifting magnets are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-56220 Scrap and material handling grapples.**

- Requirements relating to scrap and material handling grapples are located in this section. These requirements were in an industry consensus standard.

**WAC 296-155-564 Appendices.**

- There are no requirements in this section.

**WAC 296-155-56400 Mobile crane hand signal chart.**

- This appendix contains mobile crane hand signals. These signals were in an industry consensus standard.

**WAC 296-155-56405 Examples of types of cranes.**

- This appendix contains diagrams of other types of cranes.

**WAC 296-155-56410 Personnel platform lift planning and authorization form.**

- This appendix contains a personnel platform lift planning and authorization form. This form came from an industry consensus standard.

**WAC 296-155-56415 Qualifications for operators of below-the-hook lifting devices.**

- This appendix contains information for the qualifications for operators of below the hook lifting devices. This chart came from an industry consensus standard.

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**WAC 296-155-56420 Operator certification – Written examination – Technical knowledge criteria.**

- This appendix contains information relating to operator certification, written examination and technical knowledge. This information came from the federal rule.

**WAC 296-155-56425 Sample declaration form for hours of experience.**

- This appendix contain a sample declaration form for operator hours of experience. This form came from current rule.

**WAC 296-155-56430 Assembly/disassembly – Working under the boom, jib or other components – Sample procedures for minimizing the risk of unintended dangerous boom movement.**

- This appendix contains information on assembly/disassembly while working under the boom, jib or other components. This appendix came from the federal rule.

**WAC 296-155-56435 Work area chart.**

- This appendix contains work area charts. These charts came from an industry consensus standard.

**WAC 296-155-77100 Hoists, elevators, excavators, and conveyors.**

- The requirements in this section were moved from current WAC 296-155-525.

**WAC 296-155-77105 Material hoists, personnel hoists, and elevators.**

- The requirements in this section were moved from WAC 296-155-530.
- Subsection (3)(d): Changed the requirement relating to towers being anchored to structures at intervals not exceeding thirty feet instead of twenty-five feet. This change was made for consistency. Current industry standard requires thirty feet as well as current WAC 296-96-09000.

**WAC 296-155-77110 Base-mounted drum hoists.**

- The requirements in this section were moved from current WAC 296-155-535.

**WAC 296-155-77115 Overhead hoists.**

- The requirements in this section were moved from current WAC 296-155-540.

**WAC 296-155-77120 Conveyors.**

- The requirements in this section were moved from current WAC 296-155-545.

**WAC 296-155-77125 Aerial cableways.**

- The requirements in this section were moved from current WAC 296-155-550.

**WAC 296-155-77130 Concrete bucket towers.**

- The requirements in this section were moved from current WAC 296-155-560.

**WAC 296-155-77135 Hoisting engines.**

- The requirements in this section were moved from current WAC 296-155-565.

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**AMENDED SECTIONS:**

**WAC 296-45-25510 Fall protection.**

- Updated a reference in the note after subsection (12).

**WAC 296-54-51160 Leg protection.**

- Updated a reference in the exception after subsection (1).

**WAC 296-99-040 What practices must an employer follow for entry into grain storage structures?**

- Updated a reference in subsection (2).

**WAC 296-155-24525 Appendix B to Part C-1 – Fall restraint and fall arrest (employer information only).**

- Updated references.

**WAC 296-155-325 General requirements for storage.**

- Moved requirements from current WAC 296-155-330(8) to this section for better organization of information.

**WAC 296-155-329 Qualified person – Rigging.**

- Deleted current language from this section and added a note that reads, “Rigging requirements have been moved to WAC 296-155-556 through 296-155-562.”

**WAC 296-155-52900 Scope.**

- Subsection (3): Clarified the language by adding titles to the referenced sections.
- Renumbered subdivisions (l) through (x).
- Subsection (3)(a): Added a reference for clarity.
- Subsection (3)(c): Added the words “For rigging requirements see WAC 296-155-556 through 296-155-562” for clarity.
- Subsection (3)(e): Replaced language with the federal equivalent language. This language now reads, “Digger derricks when used for augering holes for poles carrying electric and telecommunication lines, placing and removing the poles, and for handling associated materials to be installed on or removed from the poles. Digger derricks used in work subject to chapter 296-45 WAC, Safety Standards for Electrical Workers, must comply with chapter 296-45 WAC. Digger derricks used in work for telecommunication service (as defined in chapter 296-32 WAC, Safety Standards for Telecommunications) must comply with chapter 296-32 WAC.”
- Subsection (3)(i): Replaced language with the federal equivalent language. Also, added a clarifying statement at the end of this paragraph. This language reads, “Powered industrial trucks (forklifts) except when configured to hoist and lower (by means of a winch or hook) and horizontally move a suspended load. (Powered industrial trucks including their attachments do not need to be certified by an accredited certifier. Operators must follow the requirements in Chapter

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296-863 WAC, Forklifts and Other Powered Industrial Trucks and WAC 296-155-53300 of this chapter.)”

- Subsection (3)(l): Added this new exemption because there is no operator certification for these types of cranes. The language reads, “Overhead/bridge cranes or hoists that travel or trolley manually.”
- Subsection (3)(p): Renumbered and added federal equivalent language. The language reads, “Anchor handling or dredge-related operations with a vessel or barge using an affixed A-frame.”
- Subsection (3)(v): Added federal equivalent language that reads, “Permanently installed overhead/bridge, gantry cranes, semi-gantry, cantilever gantry, wall cranes, storage bridge cranes, and others having the same fundamental characteristics which are located in manufacturing facilities or powerhouses.”
- Subsection (3)(w): Combined subdivisions (u) and (v) for clarity. This subdivision becomes (w) and reads, “Cranes and their operators used on-site in manufacturing facilities or powerhouses for occasional or routine maintenance and repair work.”
- Subsection (3)(x): Added federal equivalent language by adding “helicopter cranes” to the list of exemptions.
- Subsection (4): This subsection was renumbered to (5).
- Added a new subsection (4) for clarity that reads, “Digger derricks that do not meet the exemption criteria in subsection (3)(e) above must comply with WAC 296-155-529 (Crane certifier accreditation and crane certification) through 296-155-53300 (Operator qualifications and certification) after July 1, 2012.”
- Added a new subsection (6) using federal equivalent language that reads, “Work covered by chapter 296-45 WAC, Safety Standards for Electrical Workers is deemed in compliance with WAC 296-155-53408.”
- Added a new subsection (7) using federal equivalent language that reads, “WAC 296-155-53400(35) through (39) does not apply to cranes designed for use on railroad tracks, when used on railroad tracks that are used as part of the general railroad system of transportation that is regulated pursuant to the Federal Railroad Administration under 49 CFR, Part 213, and that comply with applicable Federal Railroad Administration requirements. See WAC 296-155-53400(39).”

**WAC 296-155-52902 Definitions.**

- Added the following definitions: A/D director (assembly/disassembly director), angle of loading, anti two-block device, assembly/disassembly, assist crane, attachments, basket hitch, below-the-hook lifting device, bird caging, blocking (also referred to as “cribbing”), boatswain’s chair, braided wire rope, bridle wire rope sling, builder, cable laid endless sling-mechanical joint, cable laid grommet-hand tucked, center of gravity, certified welder, choker hitch, come-a-long, competent person, construction, controlled load lowering, controlling entity, crane

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level indicator, cross rod, dedicated channel, dedicated spotter, design factor, digger derrick, employer-made equipment, encroachment, fabric (metal mesh), fall restraint system, fall zone, free fall (of the load line), free surface effect, functional testing, gin pole derrick, ground conditions, ground crew, gudgeon pins, guy, hairpin anchors, hitch (hitched), hoisting equipment, hook latch, insulating link/device, intermediate rail, list, live boom, live load line, load ratings, marine worksite, master coupling link, master link, mechanical coupling link (alloy steel chain), moving point-to-point, multi-purpose machine, nonconductive, outriggers, personal fall arrest system, personnel lifting, personnel platform-boom attached, personnel platform-suspended, personnel platform suspension system, platform occupant, platform rating, portal crane, power controlled lowering, procedures, proximity alarm, qualified evaluator (not a third party), qualified evaluator (third party), qualified rigger, qualified signal person, range control limit device, range control warning device, repetitive pickup points, rotation resistant rope, runway, section, side-boom crane, sling, special hazard warnings, spiral, stability (flotation device), stabilizer, standard method, standing wire rope, superstructure, supporting materials, tender, tilt up or tilt down operation, toe board, top rail, travel, trim, unavailable procedures, upperstructure, upperworks, up to, vertical hitch, wire rope, working load.

- Amended the definition of attachments to read as, “Attachments means any device that expands the range or tasks that can be done by the crane/derrick. Examples include, but are not limited to: An auger, drill, magnet, pile-driver, and boom-attached personnel platform.”
- Amended the definition of overhead and gantry cranes to read as, “Overhead/bridge and gantry cranes includes overhead/bridge cranes, cranes on monorails, under hung cranes, semigantry, cantilever gantry, wall cranes, storage bridge cranes, launching gantry cranes, and similar equipment, irrespective of whether it travels on tracks, wheels, or other means.”
- Amended the definition of tower crane to reads as, “Tower crane means a type of lifting structure which utilizes a vertical mast or tower to support a working boom (jib) in an elevated position. Loads are suspended from the working boom. While the working boom may be of the fixed type (horizontal or angled) or have luffing capability, it can always rotate to swing loads, either by rotating on the top of the tower (top slewing) or by the rotation of the tower (bottom slewing). The tower base may be fixed in one location or ballasted and moveable between locations. Mobile cranes that are configured with luffing jib and/or tower attachments are not considered tower cranes under this part.”

**WAC 296-155-53110 Revocation or suspension of an accreditation.**

- Added clarifying language to subsection (3), it now reads, “A suspension or revocation order may be appealed to the division of occupational safety and

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health (DOSH) or the board of industrial insurance appeals within fifteen working days after the suspension or revocation order is entered. The notice of appeal may be filed with the department or the board of industrial appeals and must include the accredited certifier's name, address, certifier number, telephone number, reason for appeal, their signature and date. DOSH may reassume jurisdiction over the matter following the timelines set out for appeal in WAC 296-900-17005. Should DOSH reassume jurisdiction over the matter, the process for reassumption outlined in WAC 296-900-17005 must be followed. If the accredited certifier does not agree with the department's redetermination, the matter will be forwarded to the board of industrial insurance appeals upon receiving further appeal from the accredited certifier. The board of industrial insurance appeals must hold the hearing in accordance with procedures established in RCW 49.17.140. Any party aggrieved by an order of the board of industrial insurance appeals may obtain superior court review in the manner provided in RCW 49.17.150."

**WAC 296-155-53114 Issuance of temporary and annual certificates of operation.**

- Subsection (5): Deleted the words "and crane component (component meaning: Luffing boom, swing away jibs, fly sections, jibs at variable offsets and boom section)". This subsection now reads, "The accredited crane certifier must attach an identification sticker if not already attached and legible to each crane. The identification sticker number must be entered on the inspection worksheet submitted to the department. Identification stickers may only be removed by a department representative or an accredited crane certifier". The inspection criteria for components was placed in WAC 296-155-53402. This inspection will be done by the assembly/disassembly director.
- Deleted the note after subsection (5).

**WAC 296-155-53200 General inspection criteria, wire rope inspection and removal criteria, and preproof load test requirements for all cranes.**

- Subsection (1)(b): Clarified language for consistency. It now reads, "Crane monthly and annual inspection documentation."
- Subsection (2) and (3): Updated references.
- Subsection (5)(d): Corrected a typographical error.
- Subsection (7)(f): Added language for clarity. It now reads, "Proof load tests require the use of freely suspended certified weights, or scaled weights using a certified scale with a current certificate of calibration; however, line pull test can be accomplished using a static test."

**WAC 296-155-53202 Additional inspection criteria and proof load testing – Mobile cranes.**

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- Subsection (4)(a): Removed the words “maximum line pull” in the first sentence and added the words “at least one hundred percent, but not to exceed one hundred and ten percent.”
  - Subsection (4)(b): Removed the words “and stability” for clarity. It now reads, “Annual proof load testing. After the crane has passed the visual and operational tests, a proof load test must be conducted in the as-configured condition and must be performed within the structural section of the manufacturer’s load chart, as applicable. This test must be documented on the form or in the format approved by the department. A copy of this completed form and inspection worksheets must be sent to the department within ten working days upon completion of the examination.”
  - Subsection (4)(c): Deleted this item. The inspection criteria for components was placed in WAC 296-155-53402.

**WAC 296-155-53204 Additional inspection criteria and proof load testing – Articulating boom cranes.**

- Deleted subsection (3) that relates to quadrennial proof load testing. The inspection criteria for components was placed in WAC 296-155-53402. This inspection will be done by the assembly/disassembly director.

**WAC 296-155-53206 Additional inspection criteria and proof load testing – Tower cranes.**

- Subsection (4)(b): Clarified language for consistency. It now reads, “Crane monthly and annual inspection documentation.”

**WAC 296-155-53210 Additional inspection criteria and proof load testing – Overhead and bridge cranes.**

- Changed the title of this section to “Additional inspection criteria and proof load testing – Overhead/bridge and gantry bridge cranes.”

**WAC 296-155-53212 Additional inspection criteria and proof load testing – Derricks.**

- Subsection (2): Renumbered the table.

**WAC 296-155-53214 Crane decertification and reinstatement.**

- Subsection (1): Added the words “and must be inspected by an accredited crane certifier” for clarity. It now reads, “If any of the following occur, the certification becomes invalid and must be inspected by an accredited crane certifier:”
- Subsection (1)(c): Added the words “that affects the safe operation of the crane/derrick” for clarity. It now reads, “Any significant modifications or significant repairs of a load sustaining/bearing part that affects the safe operation of the crane/derrick.”
- Added a new subsection (1)(d) for clarity. It reads, “Any deficiency that affects the safe operation of the crane or derrick that has been identified by a qualified person or through an inspection by the department of labor and industries.”

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- Subsection (2): Added department contact information.
  - Subsection (3): Fixed typographical errors and change “shall” to “must”.

**WAC 296-155-53300 Operator qualifications and certification.**

- Subsection (1): Added clarifying language that now reads, “Prior to operating any crane/derrick covered under chapter 296-155 WAC, Part L, with the exception of the trainee/apprentice requirements outlined in subsection (2) of this section and those cranes exempt in WAC 296-155-52900(3), the employer must ensure that the operator meets the following requirements:”
- Subsection (1)(a): Renumbered table.
- Added a new subsection (2)(b) using federal language. This language reads, “(b) A determination through a written test that:
  - (i) The individual knows the information necessary for safe operation of the specific type of equipment the individual will operate, including all of the following:
    - (A) The controls and operational/performance characteristics.
    - (B) Use of, and the ability to calculate load/capacity information on a variety of configurations of the equipment.
    - (C) Procedures for preventing and responding to power line contact.
    - (D) Technical knowledge similar to the subject matter criteria listed in WAC 296-155-56420 of this part applicable to the specific type of equipment the individual will operate. Use of WAC 296-155-56420 criteria meets the requirements of this provision.
    - (E) Technical knowledge applicable to:
      - (I) The suitability of the supporting ground and surface to handle expected loads.
      - (II) Site hazards
      - (III) Site access.
    - (F) This part, including applicable incorporated materials.
  - (ii) The individual is able to read and locate relevant information in the equipment manual and other materials containing information referred to in subsection (1)(b)(i) of this section.”
- Added a new subsection (1)(c) using federal language. This language reads, “A determination through a practical test that the individual has the skills necessary for safe operation of the equipment, including the following:
  - (i) Ability to recognize, from visual and auditory observation, the items listed in WAC 296-155-53405(2).
  - (ii) Operational and maneuvering skills.
  - (iii) Application of load chart information.
  - (iv) Application of safe shut-down and securing procedures.”
- Added additional language to the note that reads, “An operator will be deemed qualified to operate a crane if the operator is certified under subsection (1)(a) of

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this section for the type and capacity of the cranes or for higher-capacity crane of the same type.”

- Subsection (1)(e): Corrected the table number.
- Table: Corrected the number. Changed the words “overhead cranes” to “overhead/bridge and gantry cranes” in the table for consistency. Changed “signalman” to “signal person”.
- Subsection (2)(d)(iii): Added clarifying language, it now reads, “In a multiple-crane or multiple load line lift situations; or”
- Subsection (3): Added a clarifying note that reads, “Note: The employer may accept a signed declaration from the crane operator attesting to actual hours of crane operator experience and crane related experience separated out by crane type and capacity. For sample declaration form see WAC 296-155-56425.”
- Deleted subsection (5): By adding the note to subsection (3) this subsection was no longer necessary.
- Subsection (6): Renumbered to (5) and added clarifying language. It now reads, “Crane operator experience and crane related experience must be documented and separated out by crane type and capacity; this documentation need only show the minimum amount of hours as outlined in Table 3 above. If the employer is documenting crane operating and/or related crane experience hours, the employer must provide a copy of the hours to the operator as soon as practical, if requested.”

**WAC 296-155-605 Equipment.**

- Subsection (1)(f) and (h): Updated a reference.

**WAC 296-155-680 General provisions.**

- Moved requirements from current WAC 296-155-330(11) to this section for better organization of information.

**WAC 296-155-684 Requirements for cast in place concrete.**

- Moved requirements from current WAC 296-155-330(9) to this section for better organization of information.

**WAC 296-155-704 Hoisting and rigging.**

- Subsection (3)(b): Changed “qualified rigger” to “qualified person” for consistency.
- Subsection (3)(b): Updated the reference to the rigging WAC’s.
- Subsection (4)(b): Added the following language for consistency with the rigging rule, it reads, “Whenever workers are within the fall zone and hooking, unhooking, or guiding a load, or doing the initial connection of a load to a component or structure (WAC 296-155-53400(43)(c)).”

**WAC 296-155-730 Tunnels and shafts.**

- Subsection (20)(d): Updated a reference.
- Subsection (22): Updated a reference.

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- Subsection (22)(c)(xix): Updated a reference.

**WAC 296-155-805 Removal of walls, floors, and material with equipment.**

- Subsection (3): Updated a reference.

**WAC 296-155-820 Removal of steel construction.**

- Subsection (2): Updated a reference.

**REPEALED SECTIONS:**

**WAC 296-155-330 Rigging equipment for material handling.**

- Requirements relating to rigging have been moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34901 Table F-1.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34902 Table F-2.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34903 Table F-3.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34904 Table F-4.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34905 Table F-5.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34906 Table F-6.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34907 Table F-7.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34908 Table F-8.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34909 Table F-9.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34910 Table F-10.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

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**WAC 296-155-34911 Table F-11.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34912 Table F-12.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34913 Table F-13.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34914 Table F-14.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34915 Table F-15.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34916 Table F-16.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34917 Table F-17.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34918 Table F-18.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34919 Table F-19.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-34920 Table F-20.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-525 Cranes and derricks.**

- Requirements relating to cranes and derricks were moved to WAC 296-155-529 through 296-155-56435.
- Requirements relating to hoists, elevators and conveyors were moved to Part R of this chapter.

**WAC 296-155-527 Appendix A to WAC 296-155-525.**

- Requirements relating to cranes and derricks were moved to WAC 296-155-529 through 296-155-56435.

**WAC 296-155-530 Material hoists, personnel hoists, and elevators.**

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- Requirements relating to material hoists, personnel hoists, and elevators were moved to WAC 296-155-77105.

**WAC 296-155-535 Base-mounted drum hoists.**

- Requirements relating to base-mounted drum hoists were moved to WAC 296-155-77110.

**WAC 296-155-540 Overhead hoists.**

- Requirements relating to overhead hoists were moved to WAC 296-155-77115.

**WAC 296-155-545 Conveyors.**

- Requirements relating to conveyors were moved to WAC 296-155-77120.

**WAC 296-155-550 Aerial cableways.**

- Requirements relating to aerial cableways were moved to WAC 296-155-77125.

**WAC 296-155-555 Gin poles.**

- Requirements relating to gin poles were moved to WAC 296-155-543.

**WAC 296-155-560 Concrete bucket towers.**

- Requirements relating to concrete bucket towers were moved to WAC 296-155-77130.

**WAC 296-155-565 Hoisting engines.**

- Requirements relating to hoisting engines were moved to WAC 296-155-77135.

**WAC 296-155-570 Rigging – Wire rope.**

- Requirements relating to rigging were moved to WAC 296-155-556 through 296-155-56220.

**WAC 296-155-59901 Table 1.**

**WAC 296-155-59902 Table 2.**

**WAC 296-155-59903 Table 3.**

**WAC 296-155-59904 Table 4.**

**WAC 296-155-59905 Table 5.**

**WAC 296-155-59906 Table 6.**

**WAC 296-155-59907 Table 7.**

**WAC 296-155-59908 Table 8.**

**WAC 296-155-59909 Table 9.**

**WAC 296-155-59910 Table 10.**

**WAC 296-155-59911 Table 11.**

**WAC 296-155-59912 Table 12.**

**WAC 296-155-59913 Table 13.**

**WAC 296-155-59914 Table 14.**

**WAC 296-155-59915 Table 15.**

**WAC 296-155-59916 Table 16.**

**WAC 296-155-59917 Table 17.**

**WAC 296-155-59918 Table 18.**

**WAC 296-155-59919 Table 19.**

**CR 103 RULE-MAKING ORDER (RCW 34.05.360)**

Department of Labor and Industries

Division of Occupational Safety and Health

Hearing Dates: October 5, 6 and 11, 2011

CR-103 Filing Date: December 20, 2011

**Attachment 1**

(Purpose Statement)

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**WAC 296-155-59920 Table 20.**

**Changes other than editing from proposed to adopted version**

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**Describe any changes other than editing from proposed to adopted version:**

As a result of written and oral comments received, the following sections are being changed as indicated below:

**CHANGES TO THE RULES** (Proposed rule versus rule actually adopted):

**WAC 296-155-52900 Scope.**

- In subsection (3)(e), modified the exemption relating to digger derricks. It now reads, "Digger derricks when used for activities that are covered under chapter 296-45 WAC, Safety standards for electrical workers, or chapter 296-32 WAC, Safety standards for telecommunications. Cranes other than digger derricks when used for activities that are covered under chapter 296-45 WAC, Safety standards for electrical workers, or chapter 296-32 WAC, Safety standards for telecommunications are **NOT** exempt."
- In subsection (4), modified the language relating to digger derricks and when the section would apply. It now reads, "Digger derricks that do not meet the exemption criteria in subsection (3)(e) of this section must comply with WAC 296-155-529 (Crane certifier accreditation and crane certification) through WAC 296-155-53300 (Operator qualifications and certification) one hundred and eighty days after the effective date of this section."

**WAC 296-155-52902 Definitions.**

- In the definition of "boom", the department removed the word "equipment". It now reads, "Boom (other than tower cranes) means an inclined spar, strut, or other long structural member which supports the upper hoisting tackle on a crane or derrick. Typically, the length and vertical angle of the boom can be varied to achieve increased height or height and reach when lifting loads. Booms can usually be grouped into general categories of hydraulically extendible, cantilevered type, latticed section, cable supported type or articulating type."
- Modified the definition of "construction" It now reads, "Construction work means (for purposes of this part) all or any part of excavation, construction, erection, alteration, repair, demolition, and dismantling of buildings and other structures and all related operations; the excavation, construction, alteration, and repair of sewers, trenches, caissons, conduits, pipelines, roads, and all related operations; the moving of buildings and other structures, and the construction, alteration, repair, or removal of wharfs, docks, bridges, culverts, trestles, piers, abutments, or any other related construction, alteration, repair, or removal work. Construction work does not include the normal day-to-day activities at manufacturing facilities or powerhouses."
- Deleted the definition of "equipment".
- In the definition of "ground conditions" the department changed the word "equipment" to "crane/derrick", it now reads, "Ground conditions means the ability of the ground to support the crane/derrick (including slope, compaction, and firmness)."

**WAC 296-155-53200 General inspection criteria, wire rope inspection and removal criteria, and preproof load test requirements for all cranes.**

- In subsection (7)(f), the department added the words "and certified scale with a current certificate of calibration". It now reads, "Proof load tests require the use of freely suspended certified weights, or scaled weights using a certified scale with a current

**Changes other than editing from proposed to adopted version**

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certificate of calibration; however, line pull test can be accomplished using a static test and a certified scale with a current certificate of calibration”.

**WAC 296-155-53300 Operator qualifications and certification.**

- In subsection (1)(a), the department added the words “which has an accredited program” after the word “organization”. It now reads, “Has a valid crane operator certificate, for the type of crane to be operated, issued by a crane operator testing organization, which has an accredited program, accredited by a nationally recognized accrediting agency. The operator certification must include a successful passing of a written and practical examination for each crane category listed in Table 3 and by crane type for mobile cranes.”
- In subsection (1)(d), the department added a “/” between the words “crane” and “equipment”. The department also added the words “and the applicable ASME standard” after the words “crane/equipment manufacturer”. It now reads, “If there is no accredited written or practical test for operator certification available, the employer must ensure the operator has been completely trained, evaluated and tested by the employer on the operating procedures for the piece of equipment in use as recommended by the crane/equipment manufacturer and the applicable ASME standard. This process must be documented and made available upon request.”
- In Table 3, the department added the words “including digger derricks” to (1)(c) and (1)(d).
- In Table 3, the department added the words “not including digger derricks” to (5).
- In subsection (2)(c), the department added the words “derrick”, “crane/derrick” and “derrick”. It now reads “Qualified crane/derrick operator. While operating the crane/derrick, the trainee/apprentice must be continuously supervised by a qualified crane/derrick operator who meets the following requirements:”
- In item (2)(c)(i), the department added the word “derrick”. It now reads, “The qualified crane/derrick operator is an employee or agent of the trainee’s/apprentice’s employer.”
- In item (2)(c)(ii), the department added the word “derrick” and replaced the word “equipment” with “crane/derricks”. It now reads, “The qualified crane/derrick operator under this section is familiar with the proper use of the crane/derricks controls.”
- In item (2)(c)(iii), the department added the word “derrick” in two places. It now reads, “While supervising the trainee/apprentice, the qualified crane/derrick operator performs no tasks that detract from the qualified crane/derrick operator’s ability to supervise the trainee/apprentice.”
- In item (2)(c)(iv), the department added the word “derrick”. It now reads, “For cranes other than tower cranes: The qualified crane/derrick operator and the trainee/apprentice must be in direct line of sight of each other. In addition, they must communicate verbally or by hand signal.”

**WAC 296-155-53408 Power line safety.**

- In subdivision (2)(c), the department added the words “the utility owner” and deleted an “s” from the word “operator”, it now reads, “Voltage information. Where Option (3) is used, the utility owner/operator of power lines must provide the requested voltage information prior to commencement of work or within two working days of the employer’s request.”
- In subdivision (4)(e), the department added the words “utility owner” and deleted the words “power line”. It now reads, “A planning meeting with the employer and utility

**Changes other than editing from proposed to adopted version**

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owner/operator (or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution) is held to determine the procedures that will be followed to prevent electrical contact and electrocution. At a minimum these procedures must include:"

**WAC 296-155-53412 Operational aids.**

- In sub-item (3)(d)(ii)(B), the department corrected a reference in the exception. It now reads, "The requirements in subsection (3)(d)(ii)(A) and (B) of this section do not apply to such lattice boom cranes when used for dragline, clamshell (grapple), magnet, drop ball (wrecking ball), container handling, concrete bucket, marine operations that do not involve hoisting personnel, and pile driving work."

**WAC 296-155-56425 Sample declaration form for hours of experience.**

- In the table, the department added the words "including digger derricks" to (1)(c) and (1)(d).
- In the table, the department added the words "not including digger derricks" to (5).