

1926.1400 Cranes and Derricks in Construction

Bringing Clarity to Osha's New Crane and Derricks Rule



1926.1400 Cranes and Derricks in Construction

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47906 Federal Register / Vol. 75, No. 152 / Monday, August 9, 2010 / Rules and Regulations

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1926

[Docket ID-OSHA-2007-0066]

RI 1218-AC01

Cranes and Derricks in Construction

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Final rule.

SUMMARY: OSHA is revising the Cranes and Derricks Standard and related sections of the Construction Standard to update and specify industry work practices necessary to protect employees during the use of cranes and derricks in construction. This final standard also addresses advances in the designs of cranes and derricks, related hazards, and the qualifications of employees needed to operate them safely. Under this final rule, employers must determine whether the ground is sufficient to support the anticipated weight of hoisting equipment and associated loads. The employer is then required to assess hazards within the work zone that would affect the safe operation of hoisting equipment, such as those of power lines and objects or personnel that would be within the work zone or swing radius of the hoisting equipment. Finally, the employer is required to ensure that the equipment is in safe operating condition via required inspections and that employees in the work zone are trained to recognize hazards associated with the use of the equipment and any related duties that they are assigned to perform.

DATES: This final rule will become effective November 8, 2010.

The incorporation by reference of specific publications listed in this final rule is approved by the Director of the Federal Register as of November 8, 2010.

ADDRESSES: In accordance with 29 U.S.C. 2112(a)(2), the Agency designates Joseph M. Woodward, Associate Solicitor of Labor for Occupational Safety and Health, Office of the Solicitor, Room S-4004, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210, to receive petitions for review of the final rule.

FOR FURTHER INFORMATION CONTACT: General information and press inquiries. Contact Ms. Jennifer Ashley, Director, Office of Communications, OSHA, U.S. Department of Labor, Room N-3647, 200 Constitution Avenue, NW.,

Washington, DC 20210; telephone (202) 693-1999 or fax (202) 693-1634.

• **Technical inquiries:** Contact Mr. Carvin Branch, Director of Construction, Room N-3468, OSHA, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210; telephone (202) 693-2020 or fax (202) 693-1699.

• **Copies of this Federal Register notice.** Available from the OSHA Office of Publications, Room N-3101, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington DC 20210; telephone (202) 693-1688.

• **Electronic copies of this notice.** Go to OSHA's Web site (<http://www.osha.gov>), and select "Federal Register," "Date of Publication," and then "2010."

SUPPLEMENTARY INFORMATION:

Availability of Incorporated Standards.

The standards published by the American National Standards Institute (ANSI), the American Society of Mechanical Engineers (ASME), the American Welding Society (AWS), the British Standards Institution (BSI), the International Organization for Standardization (ISO), the Power Crane and Shovel Association (PCSA), and the Society of Automotive Engineers (SAE) required in subpart CC are incorporated by reference into this subpart with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than the editions specified in subpart CC, the Occupational Safety and Health Administration (OSHA) must publish a notice of change in the Federal Register and the material must be available to the public.

All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, telephone 202-741-6030, or go to: <http://www.archives.gov/federal-register/code-of-federal-regulations/ibr-locations.html>. Also, the material is available for inspection at any OSHA Regional Office or the OSHA Docket Office (U.S. Department of Labor, 200 Constitution Avenue, NW., Room N-2625, Washington, DC 20210; telephone 202-693-2350 (TTY number: 877-889-5627)).

I. General

A. Table of Contents

The following Table of Contents identifies the major preamble sections in this notice and the order in which they are presented:

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 - A. Table of Contents

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A. History

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C. Hazards Associated with Cranes and Derricks in Construction Work

III. The SBREFA Process

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V. Procedural Determinations

A. Legal Authority

B. Executive Summary of the Final Economic Analysis; Final Regulatory Flexibility Analysis

C. OMB Review Under the Paperwork Reduction Act of 1995

D. Federalism

E. State-Plan States

F. Unfunded Mandates Reform Act

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H. List of Subjects in 29 CFR Part 1926

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VI. Amendments to Standards

II. Background

A. History

The Occupational Safety and Health Act of 1970 (84 Stat. 1590, 29 U.S.C. 651 et seq.) (the OSH Act) authorizes the Secretary of Labor to adopt safety and health standards to reduce injuries and illnesses in American workplaces. Pursuant to that authority, the Secretary adopted a set of safety and health standards applicable to the construction industry, 29 CFR part 1926. Initially, standards for the construction industry were adopted under the Construction Safety Act, 40 U.S.C. 333. Under the Construction Safety Act, those standards were limited to employers engaged in Federally-financed or Federally-assisted construction projects. The Secretary subsequently adopted them as OSHA standards pursuant to Sec. 6(a) of the OSH Act, 29 U.S.C. 655(a), which authorized the Secretary to adopt established Federal standards as OSH Act standards within the first two years the OSH Act was effective (see 36 FR 25232, Dec. 30, 1971). Subpart N of 29 CFR part 1926, entitled "Cranes, Derricks, Hoists, Elevators, and Conveyors," was originally adopted through this process.

The section of subpart N of 29 CFR part 1926 that applied to cranes and derricks was former § 1926.550. That section relied heavily on national consensus standards that were in effect in 1971. In some cases incorporating the consensus standards by reference. For example, former § 1926.550(b)(2) required crawler, truck, and locomotive cranes to meet applicable requirements for design, inspection, construction, testing, maintenance, and operation prescribed in ANSI B30.5-1968, "Crawler, Locomotive and Truck Cranes." Similarly, former § 1926.550(e)

Osha has provided the rule in the Federal Register and in a "Regulatory Text Version"...

OSHA is making this document, the regulatory text, available for informational purposes only. This action does not affect the effective date of the final rule on Cranes and Derricks in Construction, which will be 90 days after August 9, 2010, the date the final rule will be published in the Federal Register. Until the date of publication, the full rule, including the preamble, can be found at <http://www.efr.gov/wspsectest.aspx>. After publication the rule can be found at the Federal Register at www.osha.gov.

NOTE: Boom free fall is prohibited when an employee is in the fall zone of the boom or load, and load line free fall is prohibited when an employee is directly under the load; see § 1926.1426.

§ 1926.1426. Free fall and controlled load lowering.

(a) *Boom free fall prohibitions.*

(1) The use of equipment in which the boom is designed to free fall (live boom) is prohibited in each of the following circumstances:

- (i) An employee is in the fall zone of the boom or load.
- (ii) An employee is being hoisted.
- (iii) The load or boom is directly over a power line, or over any part of the area extending the Table A of § 1926.1408 clearance distance to each side of the power line; or any part of the area extending the Table A clearance distance to each side of the power line is within the radius of vertical travel of the boom or the load.
- (iv) The load is over a shaft, except where there are no employees in the shaft.
- (v) The load is over a cofferdam, except where there are no employees in the fall zone of the boom or the load.
- (vi) Lifting operations are taking place in a refinery or tank farm.

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Subpart CC - Cranes and Derricks in Construction 1926.1400

Standard Index

1926.1400 Scope.

- (a) Application
- (b) Attachments
- (c thru h) Exclusions

1926.1401 Definitions.

1926.1402 Ground conditions.

- (a) Definitions
- (b) Requirements before assembly
- (c) Controlling Entity Responsibilities
- (d) Absence of controlling entity
- (e) Unsuitable ground conditions; responsibilities of parties
- (f) This subpart not applicable to certain railroad cranes

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1926.1403 Assembly/Disassembly – Selection of manufacturer or employer procedures

- (a) Manufacturers procedures applicable to assembly or disassembly
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1926.1404 Assembly/Disassembly – General requirements (applies to all assembly & disassembly operations).

- (a) Supervision: competent-qualified person
- (b) Knowledge of procedures
- (c) Review of procedures
- (d) Crew instructions
- (e) Protecting assembly/disassembly crew members out of operator view
- (f) Working under the boom, jib or other components
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- (i) Reserved
- (j) Cantilevered boom sections
- (k) Weight of components
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- (m) Components and configurations
- (n) Reserved
- (o) Shipping pins
- (p) Pile driving
- (q) Outriggers and stabilizers
- (r) Rigging

Willis has formatted the rule into easy to read “*Project Ready*” documents beginning with a standard index of all sections of 1926.1400

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Willis 1926.1416 Operational aids

1926.1416

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§ 1926.1416 Operational aids.

→ (a) The devices listed in this section ("listed operational aids") are required on all equipment covered by this subpart, unless otherwise specified.

→ (1) The requirements in paragraphs (e)(1), (e)(2), and (e)(3) of this section do not apply to articulating cranes.

→ (2) The requirements in paragraphs (d)(3), (e)(1), and (e)(4) of this section apply only to those digger derricks manufactured after November 8, 2011.

→ (b) Operations must not begin unless the listed operational aids are in proper working order, except where an operational aid is being repaired the employer uses the specified temporary alternative measures. The time periods permitted for repairing defective operational aids are specified in paragraphs (d) and (e) of this section.

More protective alternative measures specified by the crane/derrick manufacturer, if any, must be followed.

(c) If a listed operational aid stops working properly during operations, the operator must safely stop operations until the temporary alternative measures are implemented or the device is again working properly. If a replacement part is no longer available, the use of a substitute device that performs the same type of function is permitted and is not considered a modification under § 1926.1434.

(d) Category I operational aids and alternative measures.

→ Operational aids listed in this paragraph that are not working properly must be repaired no later than 7 calendar days after the deficiency occurs. *Exception:* If the employer documents that it has ordered the necessary parts within 7 calendar days of the occurrence of the deficiency, the repair must be completed within 7 calendar days of receipt of the parts. See § 1926.1417(j) for additional requirements.

(1) Boom hoist limiting device.

→ (i) For equipment manufactured after December 16, 1969, a boom hoist limiting device is required.

Temporary alternative measures (use at least one).

One or more of the following methods must be used:

(A) Use a boom angle indicator.

(B) Clearly mark the boom hoist cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to keep the boom within the minimum allowable radius. In addition, install mirrors or remote video cameras and displays if necessary for the operator to see the mark.

(C) Clearly mark the boom hoist cable (so that it can easily be seen by a spotter) at a point that will give the spotter sufficient time to signal the operator and have the operator stop the hoist to keep the boom within the minimum allowable radius.

→ (ii) If the equipment was manufactured on or before December 16, 1969, and is not equipped with a boom hoist limiting device, at least one of the measures in paragraphs (d)(1)(i)(A) through (C) of this section must be used.

Important areas of each section have been highlighted for easier reading.

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Reference Page 03

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State Plan States

E. State-Plan States

When Federal OSHA promulgates a new standard or more stringent amendment to an existing standard, the 27 States and U.S. Territories with their own OSHA-approved occupational safety and health plans ("State-Plan States") must amend their standards to reflect the new standard or amendment, or show OSHA why such action is unnecessary, e.g., because an existing State standard covering this area is "at least as effective" as the new Federal standard or amendment, 29 CFR 1953.5(a). The State standard must be at least as effective as the final Federal rule, must be applicable to both the private and public (State and local government employees) sectors, and **must be completed within six months of the promulgation date of the final Federal rule**. When OSHA promulgates a new standard or amendment that does not impose additional or more stringent requirements than an existing standard, State-Plan States are not required to amend their standards, although the Agency may encourage them to do so.

The 27 States and U.S. Territories with OSHA-approved occupational safety and health plans are:

- Alaska
- Arizona
- California
- Hawaii
- Indiana
- Iowa
- Kentucky
- Maryland
- Michigan
- Minnesota
- Nevada
- New Mexico
- North Carolina
- Oregon
- Puerto Rico
- South Carolina
- Tennessee
- Utah
- Vermont
- Virginia
- Washington
- Wyoming

OSHA-approved State Plans that apply to State and local government employees only:

- Connecticut
- Illinois
- New Jersey
- New York
- Virgin Islands

This final rule results in more stringent requirements for the work it covers. Therefore, States and Territories with approved State Plans must adopt comparable amendments to their standards within six months of the promulgation date of this rule unless they demonstrate that such amendments are not necessary because their existing standards are at least as effective in protecting workers as this final rule.

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Project Ready documents include additional reference pages such as a list of State Plan states, Multi-Employer worksite rule, a links page and other helpful information.

Coming Soon:

"Common Language" Index

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Willis 1926.1439

1926.1439

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§ 1926.1439 Dedicated pile drivers.

(a) The provisions of subpart CC apply to dedicated pile drivers, except as specified in this section.

(b) Section 1926.1416(d)(3) (Anti two-blocking device) does not apply.

(c) Section 1926.1416(e)(4) (Load weighing and similar devices) applies only to dedicated pile drivers manufactured after November 8, 2011.

(d) In § 1926.1433, only §§ 1926.1433(d) and (e) apply to dedicated pile drivers.

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Willis 1926.1428 Signal person qualifications

1926.1428

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§ 1926.1428 Signal person qualifications.

(a) The employer of the signal person must ensure that each signal person meets the Qualification Requirements (paragraph (c) of this section) prior to giving any signals. This requirement must be met by using either Option (1) or Option (2) of this section.

(1) Option (1)—Third party qualified evaluator.

The signal person has documentation from a third party qualified evaluator (see Qualified Evaluator (third party), § 1926.1401 for definition) showing that the signal person meets the Qualification Requirements (see paragraph (c) of this section).

(2) Option (2)—Employer's qualified evaluator.

The employer's qualified (see Qualified Evaluator (not a third party), § 1926.1401 for definition) evaluator assesses the individual and determines that the individual meets the Qualification Requirements (see paragraph (c) of this section) and provides documentation of that determination. An assessment by an employer's qualified evaluator under this option is not portable—other employers are not permitted to use it to meet the requirements of this section.

(3) The employer must make the documentation for whichever option is used available at the site while the signal person is employed by the employer. The documentation must specify each type of signaling (e.g. hand signals, radio signals, etc.) for which the signal person meets the requirements of paragraph (c) of this section.

(b) If subsequent actions by the signal person indicate that the individual does not meet the Qualification Requirements (see paragraph (c) of this section), the employer must not allow the individual to continue working as a signal person until re-training is provided and a reassessment is made in accordance with paragraph (a) of this section that confirms that the individual meets the Qualification Requirements.

(c) Qualification Requirements.

Each signal person must:

- (1) Know and understand the type of signals used. If hand signals are used, the signal person must know and understand the Standard Method for hand signals.
- (2) Be competent in the application of the type of signals used.
- (3) Have a basic understanding of equipment operation and limitations, including the crane dynamics involved in swinging and stopping loads and boom deflection from hoisting loads.
- (4) Know and understand the relevant requirements of § 1926.1419 through § 1926.1422 and § 1926.1428.
- (5) Demonstrate that he/she meets the requirements in paragraphs (c)(1) through (4) of this section through an oral or written test, and through a practical test.

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Roadmap for Implementation

- Print
- Study
- Educate
- Share
- Give to Crane Operators
- Put in job trailers
- Share with subcontractors
- Make part of pre-planning

1926.1400 Cranes and Derricks in Construction

Look at the big picture:

- Anticipate some confusion about specifics of the rule for the next year.
- Some parts of the rule go into effect Nov. 8, 2010, others phase in over time.
- State Plan states have 6 months to comply
- Confirming jurisdiction for worksites may be challenging in some cases
- Some states may already have more stringent crane requirements
- It will take time to learn and understand all of the new requirements

1926.1400 Cranes and Derricks in Construction

What you can do to get clarity of the rule:

- Study each section over time; make notes if necessary
- Review sections of the rule in small classes; consider short quizzes
- Involve subcontractors; make training sessions interactive
- Make binders and give to crane operators
- Anticipate mistakes in the field. Use documents as a “teaching moment”
- Consider using Osha consultation or crane unit personnel as speakers
- Use electronic versions of the documents in shared drives to increase availability

1926.1400 Cranes and Derricks in Construction

Recommended Areas of Special Study:

1401. **Scope** – Specific Exclusions and Limited Exclusions: Power shovels, excavators and backhoes and others; Limited Exclusions such as digger derricks & articulating (knuckle boom trucks)

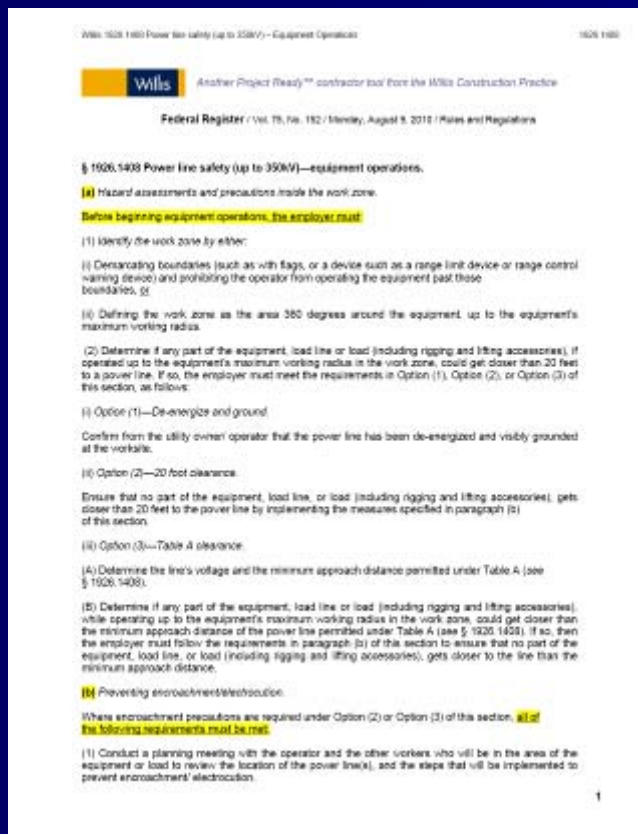
1401. **Ground Conditions** – Language requiring the “Controlling Entity” to share all information about ground conditions.

1403-1406. **Assembly/Disassembly** – “Assembly/Disassembly Director”; Supervision must be “competent-qualified”; use of Qualified Rigger; fall protection

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Recommended Areas of Special Study:

1407 – 1411. Power Line Safety - 20 ft default rule; work zone marking; provisions for working less than 20 ft from power lines; utility owner involvement; meetings; use of spotters, proximity warning devices, insulating links and non-conductive taglines.

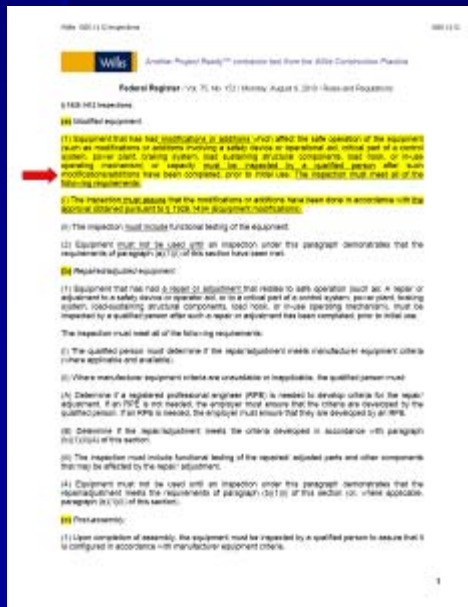


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Recommended Areas of Special Study:

1412 Inspections – Types of inspection (modified or repaired/adjusted; Post-assembly; Shift; Monthly; Annual/Comprehensive

- Documentation & documentation availability to all inspectors
- Pre-erection inspection for tower cranes



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Recommended Areas of Special Study:

1415 Safety Devices - Required devices: Level indicator; boom stops & jib stops (when configured); foot pedal brake locks; outrigger jack & stabilizer holding device or check valve; horn; proper operation of devices required

Willis 1926.1415 Safety Devices

1926.1415

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§ 1926.1415 Safety devices.

(a) Safety devices:

The following safety devices are required on all equipment covered by this subpart, unless otherwise specified:

(1) Crane level indicator:

(i) The equipment must have a crane level indicator that is either built into the equipment or is available on the equipment.

(ii) If a built-in crane level indicator is not working properly, it must be tagged-out or removed. If a removable crane level indicator is not working properly, it must be removed.

(iii) This requirement does not apply to portal cranes, derricks, floating cranes/derricks and land cranes/derricks on barges, pontoons, vessels or other means of flotation.

(2) Boom stops, except for derricks and hydraulic booms.

(3) Jib stops (if a jib is attached), except for derricks.

(4) Equipment with foot pedal brakes must have locks.

(5) Hydraulic outrigger jacks and hydraulic stabilizer jacks must have an integral holding device/check valve.

(6) Equipment on rails must have rail stops, except for portal cranes.

(7) Horn

(i) The equipment must have a horn that is either built into the equipment or is on the equipment and immediately available to the operator.

(ii) If a built-in horn is not working properly, it must be tagged-out or removed. If a removable horn is not working properly, it must be removed.

(b) Proper operation required.

Operations must not begin unless all of the devices listed in this section are in proper working order. If a device stops working properly during operations, the operator must safely stop operations. If any of the devices listed in this section are not in proper working order, the equipment must be taken out of service and operations must not resume until the device is again working properly. See § 1926.1417 (Operations) alternative measures are not permitted to be used.

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Recommended Areas of Special Study:

1416 Operational Aids – Describes two categories of operational aids; aids must

work before operations begin but allows crane to work when specific “alternative measures” are implemented; addresses timeline for repair of (within 7 or 30 days of discovery depending on category); employer exception for parts ordering (documentation); requires employer communication about repairs to affected employees; addresses lattice boom cranes manufactured after Feb. 28, 1992 and after Nov. 8, 2011; Addresses boom hoist limiting device; luffing jib limiting device; anti-two-block device and others

Willis 1926.1416 Operational aids 1926.1416

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§ 1926.1416 Operational aids.

(a) The devices listed in this section (“listed operational aids”) are required on all equipment covered by this subpart, unless otherwise specified.

(1) The requirements in paragraphs (e)(1), (e)(2), and (e)(3) of this section do not apply to articulating cranes.

(2) The requirements in paragraphs (d)(3), (e)(1), and (e)(4) of this section apply only to those digger derricks manufactured after November 8, 2011.

(b) Operations must not begin unless the listed operational aids are in proper working order, except where an operational aid is being repaired the employer uses the specified temporary alternative measures. The time periods permitted for repairing defective operational aids are specified in paragraphs (d) and (e) of this section.

More protective alternative measures specified by the crane/derrick manufacturer, if any, must be followed.

(c) If a listed operational aid stops working properly during operations, the operator must safely stop operations until the temporary alternative measures are implemented or the device is again working properly. If a replacement part is no longer available, the use of a substitute device that performs the same type of function is permitted and is not considered a modification under § 1926.1434.

(d) Category I operational aids and alternative measures.

Operational aids listed in this paragraph that are not working properly must be repaired no later than 7 calendar days after the deficiency occurs. Exception: If the employer documents that it has ordered the necessary parts within 7 calendar days of the occurrence of the deficiency, the repair must be completed within 7 calendar days of receipt of the parts. See § 1926.1417(i) for additional requirements.

(1) Boom hoist limiting device.

(i) For equipment manufactured after December 16, 1969, a boom hoist limiting device is required.

Temporary alternative measures (use at least one):

One or more of the following methods must be used:

(A) Use a boom angle indicator.

(B) Clearly mark the boom hoist cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to keep the boom within the minimum allowable radius. In addition, install mirrors or remote video cameras and displays if necessary for the operator to see the mark.

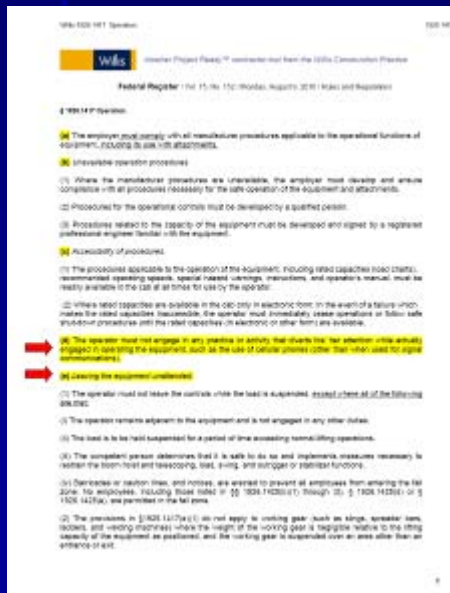
(C) Clearly mark the boom hoist cable (so that it can easily be seen by a spotter) at a point that will give the spotter sufficient time to signal the operator and have the operator stop the hoist to keep the boom within the minimum allowable radius.

(ii) If the equipment was manufactured on or before December 16, 1969, and is not equipped with a boom hoist limiting device, at least one of the measures in paragraphs (d)(1)(i)(A) through (C) of this section must be used.

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Recommended Areas of Special Study:

1417 Operations – Written procedures; readily available information in cab of crane; operator distractions (phones, radios except for operational communication); leaving equipment unattended; tag-out; storm warnings; necessary adjustment or repairs; compliance with rated capacity; traveling with a load; determination of load weight



1926.1400 Cranes and Derricks in Construction

Recommended Areas of Special Study:

1423 Fall Protection – Training required consistent with Subpart M;

Assembly/Disassembly 15 ft rule; otherwise 6 ft; addresses walkways on certain boom types manufactured after Nov. 8, 2011; employer must provide and ensure use of fall protection equipment; **anchorage to load line or hook permitted**; tower crane fall protection; fall protection training.

Willis 1926.1423 Fall Protection 1926.1423

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§ 1926.1423 Fall protection.

(a) Application.

(1) Paragraphs (b), (c)(3), (e) and (f) of this section apply to all equipment covered by this subpart except tower cranes.

(2) Paragraphs (c)(1), (c)(2), (d), (g), (j) and (k) of this section apply to all equipment covered by this subpart.

(3) Paragraphs (c)(4) and (h) of this section apply only to tower cranes.

(b) Boom walkways.

(1) Equipment manufactured after November 8, 2011 with lattice booms must be equipped with walkways on the boom(s) if the vertical profile of the boom (from cord centerline to cord centerline) is 8 or more feet.

(2) Boom walkway criteria.

(i) The walkways must be at least 12 inches wide.

(ii) Guardrails, railings and other permanent fall protection attachments along walkways are:

(A) Not required.

(B) Prohibited on booms supported by pendant ropes or bars if the guardrails/ railings/attachments could be snagged by the ropes or bars.

(C) Prohibited if of the removable type (designed to be installed and removed each time the boom is assembled/ disassembled).

(D) Where not prohibited, guardrails or railings may be of any height up to, but not more than, 45 inches.

(c) Steps, handholds, ladders, grabrails, guardrails and railings.

(1) Section 1926.502(b) does not apply to equipment covered by this subpart.

(2) The employer must maintain in good condition originally-equipped steps, handholds, ladders and guardrails/railings/grabrails.

(3) Equipment manufactured after November 8, 2011 must be equipped so as to provide safe access and egress between the ground and the operator work station(s), including the forward and rear positions, by the provision of devices such as steps, handholds, ladders, and guardrails/railings/ grabrails. These devices must meet the following criteria:

(i) Steps, handholds, ladders and guardrails/railings/grabrails must meet the criteria of SAE J185 (May 2003) (incorporated by reference, see § 1926.6) or ISO 11660-2:1994(E) (incorporated by reference, see § 1926.6) except where infeasible.

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1926.1400 Cranes and Derricks in Construction

Recommended Areas of Special Study:

1425 Keeping Clear of the Load – “Fall Zone”; employees hooking or un-hooking load; limited to essential employees; “essential employee” described; use of “J” hooks for wooden trusses; materials rigged by qualified rigger

Willis 1926.1425 – Keeping clear of the load 1926.1

Willis Another Project Ready™ contractor tool from the Willis Construction Practice

Federal Register / Vol. 75, No. 152 / Monday, August 9, 2010 / Rules and Regulations

§ 1926.1425 Keeping clear of the load.

(a) Where available, hoisting routes that minimize the exposure of employees to hoisted loads must be used, to the extent consistent with public safety.

(b) While the operator is not moving a suspended load, no employee must be within the fall zone, except for employees:

- (1) Engaged in hooking, unhooking or guiding a load;
- (2) Engaged in the initial attachment of the load to a component or structure or;
- (3) Operating a concrete hopper or concrete bucket.

(c) When employees are engaged in hooking, unhooking, or guiding the load, or in the initial connection of a load to a component or structure and are within the fall zone, all of the following criteria must be met:

- (1) The materials being hoisted must be rigged to prevent unintentional displacement.
- (2) Hooks with self-closing latches or their equivalent must be used.

Exception: “J” hooks are permitted to be used for setting wooden trusses.

- (3) The materials must be rigged by a qualified rigger.

(d) Receiving a load. Only employees needed to receive a load are permitted to be within the fall zone when a load is being landed.

(e) During a tilt-up or tilt-down operation:

- (1) No employee must be directly under the load.
- (2) Only employees essential to the operation are permitted in the fall zone (but not directly under the load). An employee is essential to the operation if the employee is conducting one of the following operations and the employer can demonstrate it is infeasible for the employee to perform that operation from outside the fall zone:
 - (1) Physically guide the load;
 - (2) Closely monitor and give instructions regarding the load’s movement; or
 - (3) Either detach it from or initially attach it to another component or structure (such as, but not limited to, making an initial connection or installing bracing).

Note: Boom free fall is prohibited when an employee is in the fall zone of the boom or load, and load line free fall is prohibited when an employee is directly under the load; see § 1926.1426.

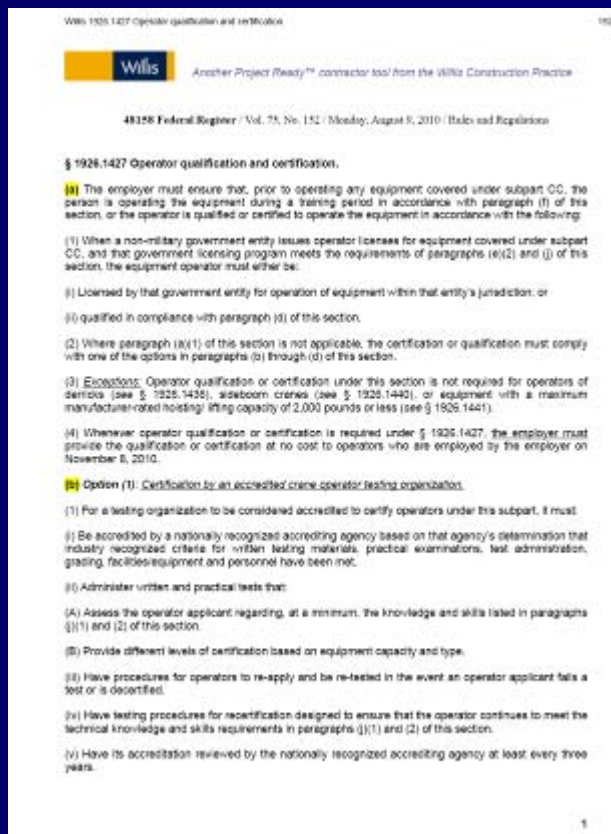
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1926.1400 Cranes and Derricks in Construction

Recommended Areas of Special Study:

1427 Crane Operator Certification – 4 year phase-in; required by Nov. 4, 2014;



4 Options:

- Accredited Testing Organization
 - Audited Employer Program
 - US Military
 - State/Local Gov. License
- Includes testing criteria, portability, testing language, operator-in-training, describes audited employer program & other provisions

1926.1400 Cranes and Derricks in Construction

Recommended Areas of Special Study

1428 Signal Person Qualifications – discusses signal types; when signal person is required; knowledge of signals, use of signals; understanding of crane operation; employer documentation of training; verbal or written test; third party qualified; employer qualified.

Willis 1926.1428 Signal person qualifications 1926.14

Willis Another Project Ready™ contractor tool from the Willis Construction Practice

Federal Register / Vol. 75, No. 152 / Monday, August 9, 2010 / Rules and Regulations

§ 1926.1428 Signal person qualifications.

(a) The employer of the signal person must ensure that each signal person meets the Qualification Requirements (paragraph (c) of this section) prior to giving any signals. This requirement must be met by using either Option (1) or Option (2) of this section.

(1) Option (1)—Third party qualified evaluator.

The signal person has documentation from a third party qualified evaluator (see Qualified Evaluator (third party), § 1926.1401 for definition) showing that the signal person meets the Qualification Requirements (see paragraph (c) of this section).

(2) Option (2)—Employer's qualified evaluator.

The employer's qualified (see Qualified Evaluator (not a third party), § 1926.1401 for definition) evaluator assesses the individual and determines that the individual meets the Qualification Requirements (see paragraph (c) of this section) and provides documentation of that determination. An assessment by an employer's qualified evaluator under this option is not portable—other employers are not permitted to use it to meet the requirements of this section.

(3) The employer must make the documentation for whichever option is used available at the site while the signal person is employed by the employer. The documentation must specify each type of signaling (e.g. hand signals, radio signals, etc.) for which the signal person meets the requirements of paragraph (c) of this section.

(b) If subsequent actions by the signal person indicate that the individual does not meet the Qualification Requirements (see paragraph (c) of this section), the employer must not allow the individual to continue working as a signal person until re-training is provided and a reassessment is made in accordance with paragraph (a) of this section that confirms that the individual meets the Qualification Requirements.

(c) Qualification Requirements.

Each signal person must:

- (1) Know and understand the type of signals used. If hand signals are used, the signal person must know and understand the Standard Method for hand signals.
- (2) Be competent in the application of the type of signals used.
- (3) Have a basic understanding of equipment operation and limitations, including the crane dynamics involved in swinging and stopping loads and boom deflection from hoisting loads.
- (4) Know and understand the relevant requirements of § 1926.1419 through § 1926.1422 and § 1926.1428.
- (5) Demonstrate that he/she meets the requirements in paragraphs (c)(1) through (4) of this section through an oral or written test, and through a practical test.

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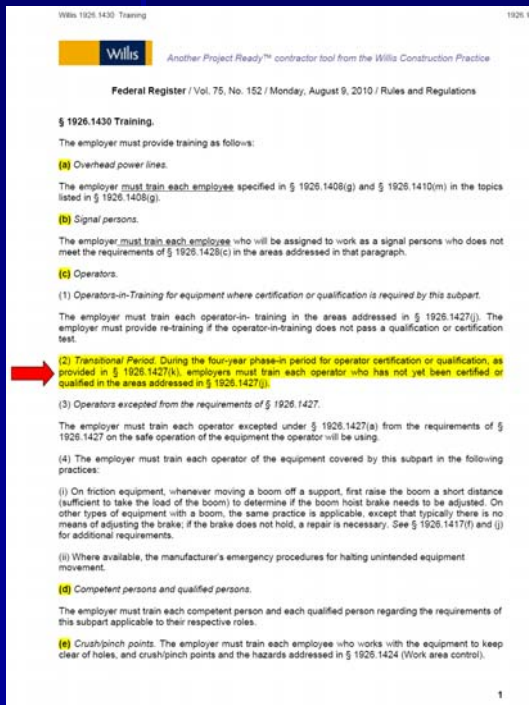
1926.1400 Cranes and Derricks in Construction

Recommended Areas of Special Study

1430 Training – List training requirements for the following:

- Overhead Power Lines
- Signal Persons
- Operators
- Competent persons and Qualified Persons
- Crush/Pinch Points
- Tag-out

- Describes employer requirements for training administration, evaluation and refresher training in relevant topics



1926.1400 Cranes and Derricks in Construction

Recommended Areas of Special Study

1435 Tower Cranes – Addresses erection, climbing & dismantling; foundations and

structural supports; plumb tolerance; multiple tower job sites; climbing procedures; pre-erection load test; monthly inspection; required documentation: monthly & annual inspection reports, modifications, operator and signal person qualifications, foundation/support design, repairs & adjustments; operational aids; temporary alternative methods

Willis 1926.1435 Tower cranes

1926

Willis

Another Project Ready™ contractor tool from the Willis Construction Practice

Federal Register / Vol. 75, No. 152 / Monday, August 9, 2010 / Rules and Regulations

§ 1926.1435 Tower cranes.

(a) This section contains supplemental requirements for tower cranes; all sections of this subpart apply to tower cranes unless specified otherwise.

(b) Erection, climbing and dismantling.

(1) Section 1926.1403 (Assembly/Disassembly—selection of manufacturer or employer procedures), § 1926.1404 (Assembly/Disassembly—general requirements (applies to all assembly and disassembly operations)), § 1926.1405 (Disassembly—additional requirements for dismantling of booms and jibs (applies to both the use of manufacturer procedures and employer procedures)), and § 1926.1406 (Assembly/Disassembly—employer procedures—general requirements), apply to tower cranes (except as otherwise specified), except that the term “assembly/disassembly” is replaced by “erecting, climbing and dismantling,” and the term “disassembly” is replaced by “dismantling.”

(2) Dangerous areas (self-erecting tower cranes). In addition to the requirements in § 1926.1404(e), for self-erecting tower cranes, the following applies:

Employees must not be in or under the tower, jib, or rotating portion of the crane during erecting, climbing and dismantling operations until the crane is secured in a locked position and the competent person in charge indicates it is safe to enter this area, unless the manufacturer's instructions direct otherwise and only the necessary personnel are permitted in this area.

(3) Foundations and structural supports. Tower crane foundations and structural supports (including both the portions of the structure used for support and the means of attachment) must be designed by the manufacturer or a registered professional engineer.

(4) Addressing specific hazards. The requirements in § 1926.1404(h)(1) through (9) apply. In addition, the A/D director must address the following:

(i) Foundations and structural supports. The A/D director must determine that tower crane foundations and structural supports are installed in accordance with their design.

(ii) Loss of backward stability. Backward stability before swinging self erecting cranes or cranes on traveling or static undercarriages.

(iii) Wind speed. Wind must not exceed the speed recommended by the manufacturer or, where manufacturer does not specify this information, the speed determined by a qualified person.

(5) Plumb tolerance. Towers must be erected plumb to the manufacturer's tolerance and verified by a qualified person. Where the manufacturer does not specify plumb tolerance, the crane tower must be plumb to a tolerance of at least 1:500 (approximately 1 inch in 40 feet).

(6) Multiple tower crane jobsites. On jobsites where more than one fixed jib (hammerhead) tower crane is installed, the cranes must be located such that no crane can come in contact with the structure of another crane. Cranes are permitted to pass over one another.

(7) Climbing procedures. Prior to, and during, all climbing procedures (including inside climbing and top climbing), the employer must:

1926.1400 Cranes and Derricks in Construction

Analysis:

- Impact of new rule will range from minor to major depending on operations.
- Some parts of the rule will required further explanation or interpretation by local Osha.
- Some things in new rule could be better defined Ex: “*Certification*” is not defined.
- Other things have been made clear: Can tie off to the hook or load line.
- Operators have more clearly defined authority and obligation in refusing to lift unsafe loads.

Remember:

- Studying the rule is the best way to develop a good working knowledge
- Take advantage of or create “teaching moments”
- Put *Project Ready* documents in the hands of operators, supervisors and others.

1926.1400 Cranes and Derricks in Construction

Questions?

