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OSHA FAQs: Cranes and Derricks in Construction – Special Equipment and Conditions

Highlights_GREEN

Employer Obligations

* Verify operators are qualified to operate affected equipment.
* Determine whether the ground can support equipment and loads.
* Assess work zone hazards that would affect the safe operation of hoisting equipment.
* Conduct safety inspections of affected equipment.
* Provide hazard recognition training for employees.

IMPORTANT Dates

* Nov. 8, 2010 – Cranes and derricks standard (CDS) went into effect
* May 23, 2013 – CDS went into effect for demolition and underground construction
* Nov. 10, 2018 – Deadline for crane operators to be certified.

OSHA’s cranes and derricks standard (CDS) was issued on Aug. 9, 2010, and was extended to crane and derrick operations in underground construction and demolition work in 2013. The standard sets out processes to prevent the most common hazards that lead to injuries and fatalities in the assembly, disassembly and operation of cranes and derricks.

Employers that use cranes and derricks in construction must comply with this standard. Employers should also become familiar with this standard if their employees work in areas or sites where cranes and derricks are in use. Finally, crane lessors that provide operators or maintenance personnel with the equipment they lease also have duties under the standard.

This Compliance Overview provides a selection of OSHA’s frequently asked questions and answers regarding forklifts, materials delivery, ground conditions, power lines, rigger qualifications and inspections.

# Forklifts

Links and Resources

OSHA’s cranes and derricks in construction [website](https://www.osha.gov/cranes-derricks/)

OSHA’s cranes and derricks [FAQs](https://www.osha.gov/cranes-derricks/faq.html)

OSHA’s small entity [Compliance Guide](https://www.osha.gov/cranes-derricks/small_entity.html#introduction) for cranes and derricks in construction standard

When is construction using a forklift required to comply with the cranes standard?

Equipment that is designed to function as both a crane and a forklift would be considered multipurpose equipment and covered by the cranes standard when configured to hoist and lower (by means of a winch or hook) and horizontally move a suspended load. However, OSHA intends to propose amendments to the cranes standard, which will clarify that forklifts are excluded from coverage by the cranes standard unless they are equipped with a boom/jib and a hoist and used like a crane.

# Material Delivery

I deliver materials to a construction site using a crane. At the site, I use the crane to move the materials from the flatbed onto the ground. Must I comply with the cranes standard?

Generally, no. The cranes standard does not apply when construction materials are delivered from the flatbed to the ground at a construction site and the crane is not used to arrange those materials in a particular sequence for hoisting. This is considered a “general industry” activity covered by applicable requirements of [29 CFR Part 1910](https://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=1&p_keyvalue=1910).

I deliver materials to a construction site using a flatbed truck equipped with an articulating crane. At the site, I use the crane to move the materials from the flatbed onto the structure being erected. Must I comply with the cranes standard?

Moving materials onto a structure being erected is a construction activity. However, [29 CFR 1926.1400(c)(17)(ii)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=1#1926.1400(c)(17)(ii)) expressly excludes from the requirements of the cranes standard the delivery of certain materials to structures on construction sites using an articulating/knuckle-boom crane if all requirements of this limited exclusion are met. These requirements include:

1. Goods delivered directly to the structure must be building supply sheet goods or building supply packaged materials, including, but not limited to, sheets of sheet rock, sheets of plywood, bags of cement, sheets or packages of roofing shingles, and rolls of roofing felt;
2. The cradle/fork must be attached to the boom; and
3. The truck must be equipped with a properly functioning automatic overload prevention device.

In situations where any of these requirements are not satisfied, or where equipment is used to hoist and hold any materials in support of their application or installation, articulating/knuckle-boom equipment does not fall under the limited exemption in [§1926.1400(c)(17)(ii)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=1#1926.1400(c)(17)(ii)) and must comply with the cranes standard. Likewise, the use of articulating/knuckle-boom cranes to deliver materials onto a structure is also covered by the cranes standard when delivering materials such as steel joists, beams, columns, steel decking or components of systems engineered metal buildings; precast concrete members or panels; roof trusses (wooden, cold formed metal, steel or other material); prefabricated building sections, such as, but not limited to, floor panels, wall panels, roof panels or roof structures; or materials similar to these.

When the articulating/knuckle-boom equipment described above is engaged in construction activity but excluded from the cranes standard, what OSHA standards apply?

When the articulating/knuckle-boom truck equipment described above is engaged in construction activity by delivering materials to a structure, but is excluded from the cranes standard because it meets the requirements in [29 CFR 1926.1400(c)(17)(i)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=1#1926.1400(c)(17)(i)), the equipment is subject to applicable construction standards in Subpart O, such as [29 CFR 1926.600(a)(6)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10767#1926.600(a)(6)), which governs work in proximity to power lines.

# Ground conditions

If a job site is unlevel, wet, soft or generally unsuited for safe crane operation, does the cranes standard require the general contractor to improve the site?

Yes, assuming that the general contractor is the controlling entity or employer described in [29 CFR 1926.1402(d)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=16#1926.1402(d)), which would normally be the case, the cranes standard requires the general contractor to improve the site. It is ultimately the controlling entity's responsibility to make sure sufficient improvements to ground conditions are made for the crane to be assembled or used within the requirements of [§1926.1402(b)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=16#1926.1402(b)). Section [1926.1402(c)(1)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=16#1926.1402(c)(1)) requires that the controlling entity must ensure that ground preparations necessary to meet the requirements in paragraph (b) of this section are provided. (See [10/1/12 Interpretation Letter to Richard Marshall](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28733).)

How long does the controlling entity's responsibility for ground conditions continue under the cranes standard?

OSHA requires the controlling entity to be responsible for ground conditions because the controlling entity has the authority to improve ground conditions and is in the best position to ensure that the conditions are sufficient. The cranes standard does not include a specific duration on this duty. Thus, the controlling entity must meet this obligation whenever the crane is setup or used, and that duty continues for the duration of the construction activity, including setup needed for assembly and disassembly, as well as for hoisting operations and movement of the crane around the site. Because construction worksite conditions are always subject to change, [§1926.1412(d)(1)(x)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=43#1926.1412(d)(1)(x)) of the cranes standard requires a competent person to inspect the ground conditions each shift to ensure proper support of the crane. In addition, [§1926.1402(e)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=16#1926.1402(e)) requires that the operator or assembly/disassembly director notify the controlling entity of inadequate ground conditions. Therefore, the controlling entity must provide for preparations whenever they are needed to address changes in ground conditions that would make its support of the crane inadequate, even if the crane has not moved on the site. (See [10/1/12 Interpretation Letter to Richard Marshall](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28733).)

# Power lines

How much time does the utility owner/operator have to comply with the cranes standard requirement to provide requested voltage information?

The cranes standard at [29 CFR §1926.1407(e)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=25#1926.1407(e)) states: “Voltage information. Where Option (3) of this section is used, the utility owner/operator of the power lines must provide the requested voltage information within two working days of the employer's request.” Thus, [§1926.1407(e)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=25#1926.1407(e)) allows a utility owner/operator two working days to provide the requested information. For the purposes of this provision, working days include all calendar days except weekends and holidays. (See the preamble to the cranes standard in the Federal Register at [75 FR 47951](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=21692).) For example, if an electric utility receives a request for voltage information on one of its distribution lines on a Friday, it will have until the end of the business day on the following Tuesday to provide the necessary information (assuming there are no holidays in between). (See [10/13/11 Interpretation Letter to Charles Kelly](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=27743).)

Is a utility owner/operator required to de-energize a power line?

No. The cranes standard does not require utility companies to de-energize power lines. The provisions of [§1926.1408](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=19) (Power Line Safety) allow de-energization as one option for employee protection from electrical hazards of power lines. Employers choosing this option must not proceed with this option if the electric utility does not de-energize the power line. (See [10/13/11 Interpretation Letter to Charles Kelly](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=27743).)

I plan to use a crane to perform construction in proximity to power lines. I properly demarcate a work zone using flags under 29 CFR 1926.1408(a)(1)(i). The demarcated boundary line runs parallel to a power line, and the distance between the demarcated boundary and the power line is equal to the minimum clearance distance required by the standard. However, the crane’s boom is physically capable of being extended beyond the demarcated boundary. Am I in compliance with the power line standard at §1926.1408?

Yes, the employer is in compliance with [29 CFR 1926.1408](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=19) as long as (1) the crane operator is prohibited from operating the crane outside of the demarcated work zone, and (2) the flags used to demarcated the work zone are close enough to each other and extend far enough along the demarcated boundary line that the operator is able to use them to judge whether the equipment remains within the demarcated boundary line. This type of demarcation—a line of flags parallel to the power line and located at least the minimum clearance distance from the power line—is one type of demarcation that is adequate under the standard at [§1926.1408(a)(1)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=19#1926.1408(a)(1)). If the demarcated boundary line is located at least the minimum clearance distance required by the standard from the power line, no further precautions are needed. However, if the demarcated work zone is located closer than the minimum clearance distance required by the standard, then the employer must either ensure that the power line is de-energized and grounded, or the employer must implement measures specified in [§1926.1408(b)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=19#1926.1408(b)). (See [3/29/12 Interpretation Letter to Walter Tucker, Jr.](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28256))

I plan to use a crane to perform construction in proximity to power lines. If I use flags to demarcate a work zone under §1926.1408(a)(1)(i), do I need to put flags around the entire perimeter?

No. The examples below demonstrate other flag configurations that could meet the demarcation requirements in [§1926.1408(a)(1)(i)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=19#1926.1408(a)(1)(i)). To meet these requirements, the flags must be close enough to each other and extend far enough along a demarcated boundary line that the operator can use them to judge whether the equipment remains within the demarcated boundary line. As stated in the preamble to the cranes standard, one way a work zone can be defined is by demarcating boundaries “[t]o the left and right of the operator, to limit the lateral movement of the boom.” (See the preamble to the cranes standard in the Federal Register at [75 FR 47952](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=21692).) The two flags in example 2 demarcate the work zone to the left and right of the operator and enable the operator to limit lateral movement of the boom so it stays the minimum clearance distance from the power line. As long as the operator understands that the boom must not be swung to the left of the flag on the building or to the right of the other flag, the minimum clearance distance will be maintained, and additional flags are not needed. (See [3/29/12 Interpretation Letter to Walter Tucker, Jr.](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28256))

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| Example 1 |  | Example 2a |

If I demarcate a work zone as described above, what is the minimum clearance distance required by the standard?

Under [§1926.1408(a)(2)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=19#1926.1408(a)(2)), an employer must “[d]etermine whether any part of the equipment, load line or load (including rigging and lifting accessories), if operated up to the equipment’s maximum working radius in the work zone, could get closer than 20 feet to a power line. If so, the employer must meet the requirements in Option (1), Option (2), or Option (3).” OSHA stated in its preamble to the final rule that “if a demarcated boundary is used, the assessment must be made with the assumption that the crane would be operated up to that boundary.” (See the preamble to the cranes standard in the Federal Register at [75 FR 47952](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=21692).) Therefore, if the demarcated boundary is 20 feet from the power line, the employer has satisfied the minimum clearance distance required by the standard. Likewise, if the demarcated boundary is closer than 20 feet to the power line, but the employer determines the line’s voltage and the demarcated boundary meets the minimum approach distance requirements in Table A (for example, 10 feet for voltages up to 50 KV), then the employer has satisfied the minimum clearance distance required by the standard as well. However, if the distance between the demarcated boundary line and the power line is less than 20 feet and less than the Table A distance, then the employer must either ensure that the power line is de-energized and grounded, or the employer must implement measures specified in [§1926.1408(b)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=19#1926.1408(b)). (See [3/29/12 Interpretation Letter to Walter Tucker, Jr.](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28256))

OSHA's power lines standards have requirements for proximity alarms and insulating links that are approved by a Nationally Recognized Testing Laboratory (NRTL), but to date, no alarms or links have been NRTL approved. What is OSHA’s current enforcement policy regarding the use of proximity alarms or insulating links that are not NRTL approved?

OSHA has issued a memorandum containing its current enforcement policy for the use of proximity alarms or insulating links that are not NRTL approved. (See [3/31/14 Temporary Enforcement Policy for Proximity Alarm and Insulating Link Use with Cranes and Derricks in Construction Memorandum](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=29018)). Because no proximity alarms or insulating links have been NRTL approved, these devices may not be used as safety measures to meet the requirements in [29 CFR 1926.1407](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=25), [§1926.1408](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=19) or [§1926.1409](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=28). However, under OSHA’s temporary enforcement policy, insulating links that are not NRTL approved are permitted in [§1926.1410](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=31) regardless of the date of manufacture, but they must be used in conjunction with the temporary alternative measures contained in [§1926.1410(d)(4)(iv)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=31#1926.1410(d)(4)(iv)), which require all employees, excluding equipment operators located on the equipment, to be “insulated or guarded from the equipment, the load line and the load through an additional means other than” the insulating link, such as insulating gloves that are rated for the voltage involved. OSHA has also presented this issue to the Advisory Committee on Construction Safety and Health (ACCSH) and intends to propose amendments to the cranes standard, which will address the unavailability of NRTL-approved proximity alarms and insulating links.

What training must the employer provide to employees assigned to work with equipment covered by the cranes standard, but that are not tasked to ground that equipment, when working in proximity to power lines?

The cranes standard includes training requirements for work in proximity to power lines, including the requirement that each employer must train each operator and crew assigned to work with equipment on the procedures to be followed to properly ground equipment and the limitations of grounding ([29 CFR 1926.1408](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=19)(g)(1)(v)). However, for employees that are not tasked to ground the crane, [§1926.1408(g)(1)(v)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=19#1926.1408(g)(1)(v)) only requires training with respect to the recognition of hazards associated with ungrounded cranes. Conditions that each crew member should be able to at least recognize include:

* Whether the crane appears to be grounded;
* How the crane is grounded to the extent that they will know how not to compromise those engineering controls during the performance of their work;
* That grounding alone will not eliminate electrical hazards, whether from induction or contact; and
* That a minimum clearance distance from the transmitter/communication tower must be maintained.

In contrast, training to ensure knowledge of more advance electrical concepts, such as induction, step and touch potentials is not required for compliance with [§1926.1408(g)(1)(v)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=19#1926.1408(g)(1)(v)).

# Inspections

What crane inspections are required by the standard?

A variety of inspections are required to ensure that equipment is in safe operating condition. These include, but are not limited to:

* Shift inspections for all equipment;
* Monthly inspections for all equipment;
* Annual inspections for all equipment;
* Shift, monthly and annual inspections for all wire rope;
* Post-assembly inspections upon completion of assembly;
* Pre-erection inspections of tower cranes;
* Inspections of modified, repaired or adjusted equipment;
* Four-year inspections of the internal vessel or flotation device for floating cranes and derricks.

Must crane inspectors be certified?

No. Crane inspectors are not required to be certified. They must, however, possess a level of expertise that is based on the complexity and type of inspections they perform (competent). For more complex inspections (such as an annual inspection or an inspection after the completion of a modification or repair), the inspector must be qualified through possession of a recognized degree, certificate or professional standing; or by extensive knowledge, training and experience, and be able to successfully demonstrate the ability to solve or resolve problems related to the inspection of cranes and related activities (qualified). (See also [3/13/12 Interpretation Letter to Kira Henschel](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28274).)

Why does the cranes standard require pre-erection inspections of tower cranes?

In response to public comments and the results of several crane investigations, OSHA now requires a pre-erection inspection for tower cranes to enable the employer to identify crane components that have been damaged when transported to the worksite and prevent damaged components from being used to erect the crane.

# Rigger qualifications

The cranes standard requires that a rigger be a "qualified rigger" to perform certain tasks. What qualifications must a rigger possess to be a qualified rigger?

A qualified rigger is a rigger who meets the criteria for a qualified person. A qualified rigger must therefore:

1. Possess a recognized degree, certificate or professional standing, or have extensive knowledge, training and experience; and
2. Successfully demonstrate the ability to solve problems related to rigging loads.

A qualified rigger must be able to properly rig the load for a particular job. He or she need not be qualified to do every type of rigging job. Each load that requires rigging has unique properties that can range from the simple to the complex. However, previous experiences does not automatically qualify the rigger to rig unstable, unusually heavy or eccentric loads that may require a tandem lift, multiple lifts or use of custom rigging equipment. In essence, employers must make sure that the person can do the rigging work needed for the exact types of loads and lifts for a particular job with the equipment and rigging that will be used for that job. (See [1/9/12 Interpretation Letter to William Irwin, Jr.](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28268))

Does a certified operator also meet the requirements of a qualified rigger?

A certified operator does not necessarily meet the requirements of a qualified rigger. The person designated as the qualified rigger must have the ability to properly rig the load for a particular job. A certified or qualified operator may meet the requirements of a qualified rigger, depending on the operator's knowledge and experience with rigging. In general, the qualifications of a rigger and an equipment operator are not considered one in the same.

Do qualified riggers have to be trained or certified by a third party?

No. Riggers do not have to be certified by an accredited organization or assessed by a third party. Employers may choose to use a third party entity to assess the qualifications of the rigger candidate, but they are not required to do so. (See [1/9/12 Interpretation Letter to William Irwin, Jr.](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28268))

Must a qualified rigger carry documentation of his or her rigger qualifications?

No. The employer must determine the qualifications of the rigger as applicable to the hoisting job to be performed. While documentation, such as a card from an assessing organization indicating that the individual has demonstrated specified skills, could serve as evidence of a rigger's qualifications, the cranes standard does not require that a rigger carry such documentation.

I received a license or certificate from an accredited organization as a trainer in rigging. Does this qualify me to be an evaluator of the qualifications of riggers?

No. There is no requirement in the cranes standard that requires a qualified rigger to be evaluated by a qualified evaluator. The employer must determine the qualifications of the rigger as applicable to the hoisting job to be performed. For further information regarding rigger qualifications, refer to related [fact sheets](https://www.osha.gov/cranes-derricks/index.html#compliance).

# Equipment issues

Sections 29 CFR 1926.1425(c)(2) and 1926.1433(d)(4) require the use of hooks with self-closing latches or the equivalent. Must slings designed and manufactured with integral hooks meet a similar requirement?

[Sections 1926.1425(c)(2)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=76#1926.1425(c)(2)) and [1926.1433(d)(4)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=94#1926.1433(d)(4)) do not apply to slings. However, if the use of slings without self-closing latches for a particular rigging job would be inconsistent with industry-recognized precautions designed to protect against the load becoming displaced, such as manufacturer's recommendations or a consensus standard for rigging, OSHA could cite such a hazard under the OSH Act's general duty clause.

Must all cranes have outriggers?

No. The cranes standard does not require all equipment to be equipped with outriggers. However, if the equipment is manufactured with outriggers, they must be either fully extended or, if the manufacturer's procedures permit, deployed as specified in the load chart.

Must outrigger position sensors or monitors shut down equipment operation when outriggers are not extended in accordance with the load chart?

No. The outrigger sensor or monitor device required by the cranes standard must enable the operator to accurately confirm the position of the outriggers in order to comply with the manufacturer's procedures and load charts. However, this requirement does not prohibit advances in safety through design and engineering, such as when a manufacturer chooses to exceed OSHA's minimum safety requirements by equipping cranes with interlocks that prohibit operation if the outriggers are not extended properly. (See [3/13/12 Interpretation Letter to Curtis Imerman](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28271).)

If operating procedures, including load charts, are only available in the cab electronically, does this meet the requirements of the cranes standard?

The cranes standard requires that the operations procedures (including load charts) must be available in the cab. Either electronic or hardcopies are allowed ([29 CFR 1926.1417(c)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=55#1926.1417(c))). Criteria for what information must be on the load charts is specified in [29 CFR 1926.1433(d)(1)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=94#1926.1433(d)(1)).

However, if the operating procedures are provided electronically, and the electronics fail, the operator must stop operations until the load chart information is available in the cab. Such information could be made available via a hardcopy, or through other functioning electronic devices including, but not limited to, a laptop, phone screen or tablet, as long as all of the information specified in [29 CFR 1926.1433(d)(1)](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=94#1926.1433(d)(1)) is available. In short, as long as an electronic source of required information is functional, such as a functioning load moment indicator system (LMI), hardcopies of this information are not required.

Source: Occupational Safety and Health Administration