



Complying with the OSHA Crane Rule:

Use of Articulating or Knuckle Boom Cranes to Deliver Materials to Construction Sites

ACTIVITY SPECIFICALLY NOT COVERED BY RULE¹

- Placing or stacking material² on the ground without arranging in a particular sequence for further hoisting³
- Placing trusses or other prefabricated components onto the ground without arranging them in a particular sequence for further hoisting⁴
- Placing precast concrete elements onto the ground without arranging them in a particular sequence for further hoisting⁵

ACTIVITY SPECIFICALLY EXEMPTED FROM THE RULE

The articulating crane must be equipped with 1) a fork or cradle assembly and 2) a properly functioning automatic overload prevention device.

- Transferring sheet goods onto a structure, so long as the articulating crane is not used to hold, support or stabilize the material in a way that facilitates construction – such as holding the material in place while it is attached to the structure⁶
- Transferring packaged goods onto a structure, so long as the articulating crane is not used to hold, support or stabilize the material in a way that facilitates construction – such as holding the material in place while it is attached to the structure⁷

ACTIVITY SPECIFICALLY NOT EXEMPTED; THEREFORE, ACTIVITY COVERED BY THE RULE

- Arranging materials on the ground in a particular sequence for further hoisting⁸
- Holding, supporting or stabilizing material in a way that facilitates construction – such as holding the material in place while it is attached to the structure⁹
- Transferring a prefabricated component onto a structure¹⁰
- Transferring a structural steel member onto a structure¹¹
- Placing a HVAC unit in its location of final use¹²

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Note: This document does not contain legal advice. If legal advice is desired, please consult competent legal counsel.

SPECIAL RULES FOR ARTICULATING/KNUCKLE BOOM CRANES USED TO DELIVER MATERIAL TO A CONSTRUCTION SITE¹³

It is common for material to be delivered to and unloaded on a construction site using a truck on which is mounted an articulating/knuckle-boom crane. Such equipment is covered by the standard when used in construction work.

When such equipment delivers materials by placing them on the ground without arranging them in a particular sequence for hoisting, the activity is not considered construction work and is not covered under the standard. This exclusion applies regardless of the type of material being delivered.

However, when the delivery equipment is used to transfer the materials onto a structure, the activity is considered construction work. Nevertheless, the activity is excluded from the standard if **all** of the following conditions are met:

- The materials are sheet goods (such as sheet rock, plywood, or sheets of roofing shingles) or packaged goods (such as roofing shingles, bags of cement, or rolls of roofing felt).
- The equipment uses a fork/cradle at the end of the boom to deliver the materials.
- The equipment is not used to hold, support, or stabilize the material to facilitate a construction activity, such as holding material in place while it is attached to the structure.
- The equipment is equipped with a properly functioning automatic overload prevention device.

This exception, as noted, is limited to delivery of sheet goods and packaged goods. It does **not** apply to delivery of prefabricated components or building sections, such as roof trusses and wall panels. It also does **not** apply to delivery of structural steel members or components of a systems-engineered metal building.

Question: I operate a lumberyard and deliver sheet goods (such as drywall or plywood) or packaged goods (such as roofing shingles, bags of cement, or rolls of roofing felt) to a construction site using a flatbed truck equipped with an articulating crane. At the site, I use the crane to place the material either onto the ground or onto the structure being erected. Must I comply with the standard?

Answer: If you only place materials on the ground without arranging the materials in a particular order for hoisting, you are not engaged in construction work and have no duties under the standard. If you place materials onto the structure, you are engaged in construction work, and the standard applies to your work. However, if you deliver only building supply sheet goods or building supply packaged materials onto the structure and your articulating/knuckleboom truck crane is equipped with a properly functioning automatic overload prevention device, you have no further duties under the standard. Otherwise, you must comply with the entire standard when using the crane to place material onto the structure.

Question: I deliver prefabricated roof trusses and wall panels to a construction site using a flatbed truck equipped with an articulating crane. At the site, I use the crane to place the material either onto the ground or onto the structure being erected. Must I comply with the standard?

Answer: You must comply with the standard if you unload the material onto the structure. You need not comply with the standard if you unload the material onto the ground without arranging the materials in a particular order for hoisting because that activity is not construction work.

COMPLIANCE IN STATES WITH STATE OSHAS

If you operate in a state with a state OSHA, it is important to check with that agency to determine if they have adopted the federal rules or whether they gone beyond them. State standards must be as stringent as the federal rules but can also be more stringent.

RULE TEXT APPLICABLE TO ARTICULATING/KNUCKLE-BOOM TRUCK CRANES¹⁴

(17) Material Delivery

(i) Articulating/knuckle-boom truck cranes that deliver material to a construction site when used to transfer materials from the truck crane to the ground, without arranging the materials in a particular sequence for hoisting.

(ii) Articulating/knuckle-boom truck cranes that deliver material to a construction site when the crane is used to transfer building supply sheet goods or building supply packaged materials from the truck crane onto a structure, using a fork/cradle at the end of the boom, but only when the truck crane is equipped with a properly functioning automatic overload prevention device. Such sheet goods or packaged materials include, but are not limited to: Sheets of sheet rock, sheets of plywood, bags of cement, sheets or packages of roofing shingles, and rolls of roofing felt.

(iii) This exclusion does not apply when:

(A) The articulating/knuckle-boom crane is used to hold, support or stabilize the material to facilitate a construction activity, such as holding material in place while it is attached to the structure;

(B) The material being handled by the articulating/knuckle-boom crane is a prefabricated component. Such prefabricated components include, but are not limited to: 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, roof structures, or similar items;

(C) The material being handled by the crane is a structural steel member (for example, steel joists, beams, columns, steel decking (bundled or unbundled) or a component of a systems-engineered metal building (as defined in 29 CFR1926 subpart R).

(D) The activity is not specifically excluded under § 1400(c)(17)(i) and (ii).

ENDNOTES

¹ See OSHA narrative in the final rule at 75 F.R. 47927 et seq. (found at http://osha.gov/FedReg_oshapdf/FED20100809.pdf): "It is common for material that is to be used in construction work to be delivered to the construction site on a truck equipped with a lifting attachment that is used either to place the materials on the ground or to place them on the structure. For example, articulating/knuckle-boom truck cranes are often used to deliver bundles of drywall to the site and then move the bundles from the truck up to a floor of the building under construction. To the extent these cranes are used in "construction work," they fall within the scope of this final rule as defined in §1926.1400(a). OSHA has long taken the view that an employer who delivers materials to a construction site is not engaged in "construction work" if that employer's work once at the site is limited to simply placing/stacking the materials on the ground."

² See OSHA narrative in the final rule at 75 F.R. 47927 et seq. (found at http://osha.gov/FedReg_oshapdf/FED20100809.pdf): "Construction typically consists of a process of assembling and attaching (or in some cases, disassembling) a vast variety of materials to form a building or other structure. In building construction, those materials typically include small, individual items (a few examples include: nails, lumber, pipes, duct work sections, electrical items, sheet goods), large individual items (a few examples include: structural steel or precast concrete columns and beams), and prefabricated structural and building system components (a few examples include: roof trusses, precast concrete wall sections, and building machinery such as boilers, pumps, and air handling equipment). All of these items must be delivered to the jobsite and unloaded from the vehicle delivering them before they can be used in the building or structure."

³ See "Small Entity Compliance Guide for Final Rule for Cranes and Derricks in Construction" at http://osha.gov/cranes-derricks/small_entity.pdf: "It is common for material to be delivered to and unloaded on a construction site using a truck on which is mounted an articulating/knuckle-boom crane. Such equipment is covered by the standard when used in construction work. When such equipment delivers materials by placing them on the ground without arranging them in a particular sequence for hoisting, the activity is not considered construction work and is not covered under the standard. This exclusion applies regardless of the type of material being delivered." See also OSHA narrative in the final rule at 75 F.R. 47927 et seq. (found at http://osha.gov/FedReg_oshapdf/FED20100809.pdf): "To summarize, when a delivery vehicle is used solely to deliver building supply materials from a supplier to a construction site by placing/stacking the materials on the ground, without arranging the materials in a particular sequence for hoisting, the equipment is not being used for a construction activity and is not subject to this rule. When an articulating/knuckle-boom truck crane that brings material to a site is used to transfer building supply sheet goods or building supply packaged materials from the vehicle onto a structure, the activity is a construction activity but the crane is excluded from this rule if it is equipped with a properly functioning automatic overload prevention device and satisfies the other requirements of the exception in § 1926.1400(c)(17). All other equipment that falls under § 1926.1400(a) is subject to this rule when delivering materials onto a structure." But see also OSHA narrative in the final rule at 75 F.R. 47927 et seq. (found at http://osha.gov/FedReg_oshapdf/FED20100809.pdf): "OSHA notes some commenter confusion regarding instances when the construction materials are not delivered to the curb or a stockyard but instead to a designated area on the construction site where the materials are staged/organized to facilitate hoisting activities. In these scenarios, OSHA construction standards apply. See, e.g., Letter to Johnson (2/6/08) (stacking of materials), Letter to Reynolds (1/5/01) (delivery of materials onto structure). When hoisting equipment is used to arrange the materials in a particular sequence for hoisting or to lift materials onto a structure that is under construction, it is being used to expedite work that is integral to the construction process and is, therefore, construction work. However, to remain consistent with existing compliance guidance, this final rule states that when lifting equipment is used solely to deliver building supply materials

from a supplier to a construction site by placing/stacking the materials on the ground, without arranging the materials in a particular sequence for hoisting, OSHA does not regard the delivery process as a construction activity. OSHA believes that this limited and conditional exclusion will exclude this equipment when used to perform such deliveries and address the concerns of commenters who only deliver construction materials to the ground.”

⁴ See “Small Entity Compliance Guide for Final Rule for Cranes and Derricks in Construction” at http://osha.gov/cranes-derricks/small_entity.pdf: “**Question 9:** I deliver prefabricated roof trusses and wall panels to a construction site using a flatbed truck equipped with an articulating crane. At the site, I use the crane to place the material either onto the ground or onto the structure being erected. Must I comply with the standard? **Answer 9:** You must comply with the standard if you unload the material onto the structure. You need not comply with the standard if you unload the material onto the ground without arranging the materials in a particular order for hoisting because that activity is not construction work.”

⁵ See OSHA narrative in the final rule at 75 F.R. 47927 et seq. (found at http://osha.gov/FedReg_osha_pdf/FED20100809.pdf): “OSHA also received a comment from a representative of the precast concrete industry requesting the exclusion of equipment used to deliver materials such as concrete manholes, septic tanks, burial vaults, concrete block, and concrete pipe... OSHA agrees that in circumstances where the equipment is used solely to deliver these types of concrete materials from a supplier to a construction site by placing/stacking the materials from the delivery vehicle to the ground in, for example, a storage or staging area, without arranging the materials in a particular sequence for subsequent hoisting, the equipment is not being used for a construction activity. However, if the equipment is used to hoist, hold, support, stabilize or place precast concrete material as part of the installation process, it is engaged in a construction activity and would be subject to this rule. For example, a truck-mounted articulating crane may be used to maneuver a precast component such as a vault or concrete pipe from the truck to its installation point in an excavation. As previously discussed, such use is a typical construction activity.”

⁶ The rule text states: (ii) Articulating/knuckle-boom truck cranes that deliver material to a construction site when the crane is used to transfer building supply sheet goods or building supply packaged materials from the truck crane onto a structure, using a fork/cradle at the end of the boom, but only when the truck crane is equipped with a properly functioning automatic overload prevention device. Such sheet goods or packaged materials include, but are not limited to: Sheets of sheet rock, sheets of plywood, bags of cement, sheets or packages of roofing shingles, and rolls of roofing felt. See “Small Entity Compliance Guide for Final Rule for Cranes and Derricks in Construction” at http://osha.gov/cranes-derricks/small_entity.pdf: **Question 8:** I operate a lumberyard and deliver sheet goods (such as drywall or plywood) or packaged goods (such as roofing shingles, bags of cement, or rolls of roofing felt) to a construction site using a flatbed truck equipped with an articulating crane. At the site, I use the crane to place the material either onto the ground or onto the structure being erected. Must I comply with the standard? **Answer 8:** If you only place materials on the ground without arranging the materials in a particular order for hoisting, you are not engaged in construction work and have no duties under the standard. If you place materials onto the structure, you are engaged in construction work, and the standard applies to your work. However, if you deliver only building supply sheet goods or building supply packaged materials onto the structure and your articulating/knuckleboom truck crane is equipped with a properly functioning automatic overload prevention device, you have no further duties under the standard. Otherwise, you must comply with the entire standard when using the crane to place material onto the structure.

⁷ See Endnote 4.

⁸ The rule text states: (i) Articulating/knuckle-boom truck cranes that deliver material to a construction site when used to transfer materials from the truck crane to the ground, without arranging the materials in a particular sequence for hoisting.

⁹ The rule text states: (iii) This exclusion does not apply when: (A) The articulating/knuckle-boom crane is used to hold, support or stabilize the material to facilitate a construction activity, such as holding material in place while it is attached to the structure. See OSHA narrative in the final rule at 75 F.R. 47927 et seq. (found at http://osha.gov/FedReg_osha_pdf/FED20100809.pdf): "OSHA is also limiting the exclusion by making it clear that it does not apply when the crane is used to hold, support or stabilize the material to facilitate a construction activity, such as holding material in place while it is attached to the structure. For example, while placing a package of shingles onto the roof of a structure would fall within the exemption, suspending the shingles in the air and moving them to follow the progress of the roofer would not. When the crane is being used to facilitate the construction activity, it has exceeded the "delivery" of goods and is therefore engaged in a process that is more complex than the scenarios addressed by the commenters who supported an exclusion for materials delivery. OSHA is also concerned that exempting this activity would provide an incentive for employers to use materials delivery cranes for other purposes, thereby undermining the rationale for the materials delivery exclusion."

¹⁰ The rule text states: (iii) This exclusion does not apply when: (B) The material being handled by the articulating/knuckle-boom crane is a prefabricated component. Such prefabricated components include, but are not limited to: 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, roof structures, or similar items.

¹¹ The rule text states: (iii) This exclusion does not apply when: (C) The material being handled by the crane is a structural steel member (for example, steel joists, beams, columns, steel decking (bundled or unbundled) or a component of a systems-engineered metal building (as defined in 29 CFR1926 subpart R).

¹² See OSHA narrative in the final rule at 75 F.R. 47927 et seq. (found at http://osha.gov/FedReg_osha_pdf/FED20100809.pdf): "OSHA declines to exclude the handling of HVACR units, as some commenters urged. Using a crane to deliver HVACR equipment is an example of using a crane to hoist and position a component of the building's mechanical systems, which is an integral part of the construction process. According to one industry commenter, during a typical installation of a large commercial rooftop HVACR unit, a mobile crane delivers the equipment to its intended location on the roof, where an HVACR technician connects the equipment to the ventilation system. Thus, unlike sheet goods and packaged materials, which are not placed in their location of final use by the delivery vehicle, delivery of HVACR equipment may be integral to its installation. Like the hoisting and movement of other building components, use of cranes and derricks to move HVACR equipment falls squarely within this rule."

¹³ This text may be found in "Small Entity Compliance Guide for Final Rule for Cranes and Derricks in Construction" at http://osha.gov/cranes-derricks/small_entity.pdf.

¹⁴ See 1926.1400(c)(17) "Material Delivery" at <http://osha.gov/doc/cranesreg.pdf>.