

# OSHA<sup>®</sup> FactSheet

## Subpart CC – Cranes and Derricks in Construction: Assembly/Disassembly

This fact sheet explains the assembly and disassembly requirements of subpart CC – Cranes and Derricks in Construction, as specified in 29 CFR 1926.1403-1926.1406 and 192.1412. These provisions are effective November 8, 2010.

### Procedures

Under this standard, employers must comply with all manufacturer prohibitions regarding assembly and disassembly. However, the standard generally allows employers to choose between the manufacturer's procedures or their own (see exception below for synthetic slings procedures). Employer procedures must be developed by a "qualified person" and must satisfy a number of specified requirements, such as providing adequate support and stability for all parts of the equipment, and positioning employees involved to minimize exposure to any unintended movement or collapse.

### Assembly/Disassembly responsibilities

- The rule requires the work to be directed by an A/D (Assembly/Disassembly) director. The A/D director must meet the criteria for both a "competent person" and a "qualified person," which are defined terms in this rule, or must be a "competent person" assisted by a "qualified person."
- The A/D director must understand the applicable procedures.
- The A/D director must review the procedures immediately prior to beginning work unless he or she understands the procedures and has

used them before for that equipment type and configuration.

- The A/D director must ensure that each member of the crew understands his or her tasks, the hazards of the tasks, and any hazardous positions or locations to avoid.
- The A/D director must verify all capacities of any equipment used, including rigging, lifting lugs, etc.
- The A/D director must also address hazards associated with the operation, including 12 specified areas of concern: site and ground conditions, blocking material, proper location of blocking, verifying assist crane loads, boom & jib pick points, center of gravity, stability upon pin removal, snagging, struck by counterweights, boom hoist brake failure, loss of backward stability, and wind speed and weather.

### Inspection

- Upon completion of assembly, but before use, the equipment must be inspected by a "qualified person" to ensure that it is configured in accordance with the manufacturer equipment criteria. If these criteria are unavailable, the employer's "qualified person," with the assistance of a registered professional engineer if necessary, must develop the appropriate configuration criteria and ensure that these criteria are met.

**This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.**

For more complete information:



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## Assembly/Disassembly, continued.

### General requirements

- A crew member who moves out of the operator's view to a location where the crew member could be injured by movement of the equipment (or load) MUST inform the operator before going to that location. The operator must not move the equipment until that crew member informs the operator that he or she has relocated to a safe position.
- Employees must never be under the boom or jib when pins (or similar devices) are being removed, unless it is required by site constraints and the A/D director has implemented procedures that minimize the risk of unintended movement and the duration and extent of exposure under the boom.
- Component weights must be readily available for all components to be assembled.
- All rigging must be done by a "qualified rigger."
- Pins may not be removed during disassembly when the pendants are in tension.
- Booms supported only by cantilevering must not exceed manufacturer limitations or RPE limitations, as applicable.
- Component selection and equipment configuration that affects the capacity or safe operation of the equipment must be in accordance with manufacturer requirements and limits or RPE requirements and limits, as applicable.

### Synthetic slings

- The employer must follow manufacturer procedures when using synthetic slings during assembly or disassembly rigging

(even when the employer has developed its own A/D procedure as an alternative to the manufacturer's other procedures.)

- Synthetic slings must be protected from abrasive, sharp or acute edges, and configurations that might reduce the sling's rated capacity.

### Outriggers and stabilizers

When outriggers or stabilizers are used or are necessary in light of the load to be handled and the operating radius:

- Outriggers and stabilizers must be fully extended or, if permitted by manufacturer procedures, deployed as specified in the load chart.
- Outriggers must be set to remove equipment weight from the wheels, except for locomotive cranes.
- Outrigger floats, if used, must be attached to the outriggers; stabilizer floats, if used, must be attached to the stabilizers.
- Each outrigger or stabilizer must be visible to the operator or to a signal person during extension and setting.
- Outrigger and stabilizer blocking must be placed under the float/pad of the jack or, if there is no jack, under the outer bearing surface of the outrigger or stabilizer beam. Blocking must also be sufficient to sustain the loads and maintain stability and must be properly placed.

### Tower cranes

- Tower cranes are subject to additional requirements for erecting, climbing and dismantling, including a pre-erection inspection (29 CFR 1926.1435).

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