

Requirements for operating and maintaining cranes

Construction - Subdivision CC



Crane operator qualifications

1926.1427 Operator Training, Certification, and Evaluation. Employers must ensure each operator is **trained, certified, and evaluated** in accordance with 1926.1427 before operating equipment covered under Subdivision CC on their own.

Exception: The requirements in 1926.1427 do not apply to operators of derricks, sideboom cranes, or cranes with a manufacturer-rated hoisting/lifting capacity of 2,000 pounds or less. (See "**Crane standard - key requirements**" for more information.)

Employees who have not been certified or evaluated may only operate a crane under continuous supervision as an **operator-in-training** in accordance with **1926.1427(b) Operator Training**.

In Oregon, employees must be **certified** through a pre-qualification/certification training period by an accredited crane operator testing organization in accordance with **1926.1427(d)**, or an audited employer program in accordance with **1926.1427(e)**.

Employees who have been trained and certified are not qualified to operate a crane on their own until they have been **evaluated** by the employer in accordance with **1926.1427(f) Operator Evaluation**.

Crane standard - key requirements

- **Ground Conditions - 1926.1402(b)**
Equipment must not be assembled or used unless ground conditions are firm, drained, and graded so that the equipment manufacturer's specifications for adequate support and degree of level are met.
- **Assembly/Disassembly Director - 1926.1404(a)(1)**
Assembly and disassembly must be directed by a person ("A/D director") who meets the criteria for a competent person and a qualified person, or by a competent person who is assisted by one or more qualified persons.
- **Qualified Rigger - 1926.1404(r)(1)**
When rigging is used for assembly and disassembly, the employer must ensure that the work is done by a qualified rigger - in addition to the requirements in 1926.251, *Rigging equipment for material handling*.
- **Keeping clear of the load - 1926.1425**
Materials must be rigged by a qualified rigger when employees are within the fall zone and engaged in hooking, unhooking, guiding, or in the initial connection of a load to a component or structure.
- **Power line safety (up to 350 kV), Hazard assessments and precautions inside the work zone - 1926.1408(a)(2)**
Before beginning equipment operations, the employer must determine if 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. Operators and crew members must be trained in the topics listed in 1926.1408(g).

- **Inspections – 1926.1412** Cranes must be inspected:
 - **Post-assembly**, by a qualified person to ensure the crane is configured in accordance with the manufacturer’s criteria
 - **Before each shift**, by a competent person
 - **Each month equipment is in service**, by a competent person who must document, sign, and date the items inspected and results of the inspection, and retain the report for three months
 - **Annually**, by a competent person who must document, sign, and date the items inspected and the results of the inspection, and retain the report for at least 12 months
- **Wire rope inspection – 1926.1413**
Wire ropes must be inspected:
 - **Before each shift**, by a competent person
 - **Monthly**, by a competent person
 - **Annually**, by a competent person who must document, sign, and date the items inspected and the results of the inspection, and retain the report for at least 12 months
- **Safety devices – 1926.1415**
The following safety devices must be on all applicable cranes:
 - Crane level indicator
 - Boom stops
 - Jib stops if a jib is attached
 - Locks on equipment that has foot pedal brakes
 - Integral holding or check valve on hydraulic outrigger jacks and hydraulic stabilizer jacks
 - Horn that is built in or immediately available to the operator

- **Operational aides – 1926.1416**
The following devices must be on all applicable cranes:
 - Boom hoist limiting device
 - Luffing jib limiting device
 - Anti two blocking device
 - Boom angle or radius indicator
 - Jib angle indicator if the equipment has a luffing jib
 - Boom length indicator if the equipment has a telescopic boom
 - Load weighing devices
- **Signal person qualifications – 1926.1428**
Signal persons must meet the standard’s qualification requirements [1926.1428(c)] by doing one of the following:
 - **Option 1:** Have documentation from a qualified third-party evaluator that shows the signal person meets the requirements
 - **Option 2:** Have the employer’s qualified evaluator assess the person and determine and document that the signal person meets the requirements
- **Overhead powerlines – 1926.1430(g)**
Training in the topics listed in 1926.1408(g) must be administered in accordance with 1926.1430(g) Training administration.

Note: Operators excepted from 1926.1427 – 1926.1430(c)(3), 1926.1436(q), 1926.1441(e)
Although operators of derricks, sideboom cranes, or equipment with a maximum manufacturer-rated hoisting/lifting capacity of 2,000 pounds or less are excepted from the standard’s certification and evaluation requirements, they must be trained on the safe operation of the equipment they will be using.



Workers

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The Technical Section of Oregon OSHA produced this fact sheet to highlight health and safety programs and rules. The information is intended to supplement the rules and provide best practices to employers.