

Cranes and Derricks

Additional Resources:

- [Complete OSHA Standard](#)
- [FAQ](#)

The controlling entity must ensure that the ground is safe for the crane to be used upon and must inform the operator of all hazards located beneath the equipment setup area (voids, tanks, utilities). Work area must be sound, properly graded and drained prior to use. 1926.1402

An Assembly/ Disassembly Director (AD) must be available who is deemed competent and qualified to ensure proper setup and tear down of all cranes per the manufacturer's directions unless the employer can show that its procedures are as safe. The AD director understands the procedures and directions of assembly and disassembly and ensures that all employees working with this practice understand the same. 1926.1403 and 1926.1404

Before assembling or disassembling any equipment, the employer must determine if any part of the equipment can get closer than 20 feet to a power line. If so, the employer must de-energize and ground or use a 20' clearance distance or use Table A clearance guide. 1926.1407

A competent person shall begin a visual inspection of the crane prior to each shift and completed before or during the shift. 1926.1412(d)(1)

At least every 12 months the equipment shall be inspected by a qualified person. 1926.1412(f)

The employer must comply with all manufacturer procedures applicable to the operation and function of the equipment including attachments. 1926.1417

A signal person must be provided at the point of operation, when the equipment is traveling and when determined by the operator or person handling the load determines it to be necessary.

Operation Near High-Voltage Power Lines	
Normal Voltage	Minimum Clearance
to 50 kV	10 feet
Over 50 to 200 kV	15 feet
Over 200 to 350 kV	20 feet
Over 350 to 500 kV	25 feet
Over 500 to 750 kV	35 feet
Over 750 to 1000 kV	45 feet

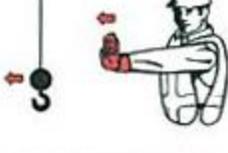
ASME B30.5-2004

Operation In Transit With No Load And Boom Lowered	
Normal Voltage	Minimum Clearance
to 0.75 kV	4 feet
Over 0.75 to 50 kV	6 feet
Over 50 to 345 kV	10 feet
Over 345 to 750 kV	16 feet
Over 750 to 1000 kV	20 feet

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The operator shall have the authority to stop and refuse to handle any loads that are deemed unsafe until a qualified person determines it is safe to proceed.

1926.1418

 <p>STOP</p>	 <p>EMERGENCY STOP</p>	 <p>HOIST</p>	 <p>RAISE BOOM</p>
 <p>SWING</p>	 <p>RETRACT TELESCOPING BOOM</p>	 <p>RAISE THE BOOM AND LOWER THE LOAD</p>	 <p>DOG EVERYTHING</p>
 <p>LOWER</p>	 <p>LOWER BOOM</p>	 <p>EXTEND TELESCOPING BOOM</p>	 <p>TRAVEL/TOWER TRAVEL</p>
 <p>LOWER THE BOOM AND RAISE THE LOAD</p>	 <p>MOVE SLOWLY</p>	 <p>USE AUXILIARY HOIST (whipline)</p>	 <p>CRAWLER CRANE TRAVEL, BOTH TRACKS</p>
 <p>USE MAIN HOIST</p>	 <p>CRAWLER CRANE TRAVEL, ONE TRACK</p>	 <p>TROLLEY TRAVEL</p>	<p>NO RESPONSE SHOULD BE MADE TO UNCLEAR SIGNALS</p>

A signal person must be provided using standard signals or another approved method in the standard. 1926.1419

Signal persons must be trained and qualified under the sections approved methods. 1926.1428

Hand signal charts must be either posted on the equipment or conspicuously posted in the immediate vicinity.

Ensure that all employees understand the dangers of the swing radius, overhead loads and falling or dropping dangers.

Employers must use a qualified rigger for rigging operations during assembly/disassembly and other activities when employees must be in the fall zone to handle a load. 1926.1404 and 1926.1425

The employer must ensure that, prior to operating any equipment covered by the section that the operator is either qualified or certified to operate the equipment. 1926.1427

The use of equipment to hoist personnel is prohibited unless the employer can demonstrate that using another method of access would be more dangerous. 1926.1431