

WAC 296-79-170 Requirements for crawler and truck cranes. (1)

Boom length indicated. The length must be plainly marked on each boom section of a mobile crane having a sectioned boom.

(2) Radius or boom angle indicator. A radius or boom angle indicator must be installed where it is readily visible to the operator's normal operating position on all cranes having a movable working boom.

(3) Safety device for light fixtures. Any light fixtures attached to a crane boom or machinery house must have a safety strap or other device attached which will prevent the fixture from falling.

(4) Boom stops. Boom stops must be:

(a) Installed to govern the upward travel of the boom to a safe limit; and

(b) Of adequate strength to prevent the boom from traveling past the vertical position.

(5) Controls marked. Crane operating controls must be marked or an explanation of the controls' functions must be posted in full view of the operator.

(6) Locking hydraulic outriggers. Hydraulic outriggers must be:

(a) Equipped with a pilot operated check valve; or

(b) Installed with a mechanical lock which will prevent outriggers from retracting in case of failure of the hydraulic system.

(7) Top of boom painted. The top six feet of the boom or jib must be painted bright yellow or other bright contrasting color if the boom is yellow.

(8) Warning devices. All cranes must be equipped with a suitable warning device such as a horn or whistle.

(9) Hook safety device. All hooks must be equipped with a safety device or other effective means must be used to prevent accidental unhooking of the load.

(10) Counterweight limited. The amount of crane counterweight must not exceed the maximum amount specified by the crane manufacturer.

(11) Use proper size wire rope for sheaves. The size and diameter of sheaves and wire rope must be compatible and follow the recommendations by the manufacturer, published by the Wire Rope Institute or other acceptable engineering practices.

(12) Loading or unloading gear. Unloading gear such as grapples, tongs, and buckets, must not be left suspended when not in use or whenever the machine is unattended.

(13) No one under load. Personnel must not position themselves under crane loads and such loads must not be carried over workers.

(14) Operating clearance from stationary objects. Where the area is accessible to workers:

(a) A distance of 30 inches must be maintained between the outermost part of a revolving crane and any stationary object within the swing radius of the crane; or

(b) The hazardous area must be temporarily guarded or barricaded.

(15) See WAC 296-24-960 when working around energized lines.

(16) Operators must avoid contacting overhead obstructions which may damage the boom or adversely affect stability. In instances where the operator may have difficulty in observing clearances, a signal person must be stationed where they can observe clearances and signal the operator.

(17) Safe travel across thoroughfares or railroad tracks.

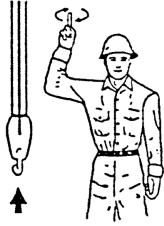
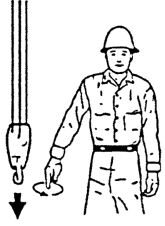

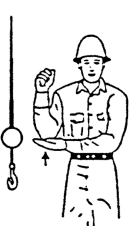
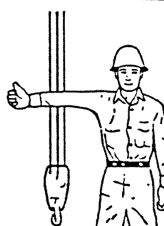
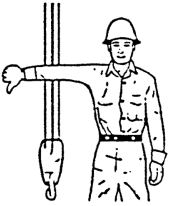
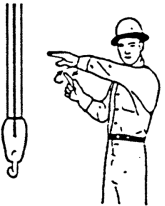
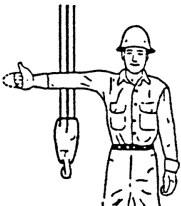
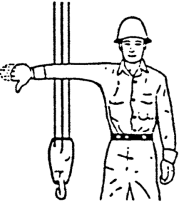
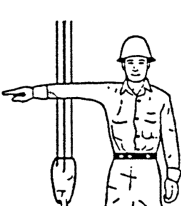
(a) When moving cranes, shovels or similar types of equipment across thoroughfares or railroad tracks and the operator does not have a clear vision of approaching traffic, a flag person must be used.

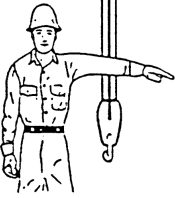
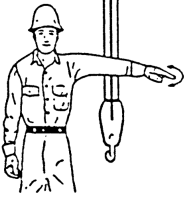
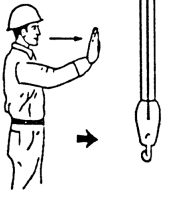
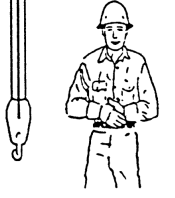
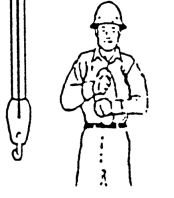
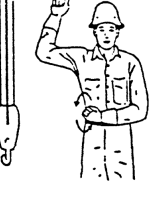
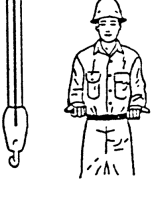
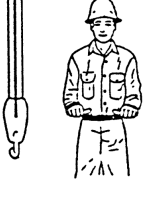
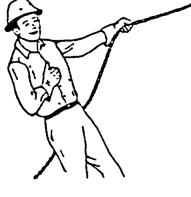
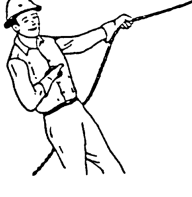
(b) The flag person must be stationed where the equipment operator can be signaled and other traffic can be controlled.

(18) Only a designated member of the crew may give signals to the crane operator. Exception: Anyone may give an emergency stop signal.

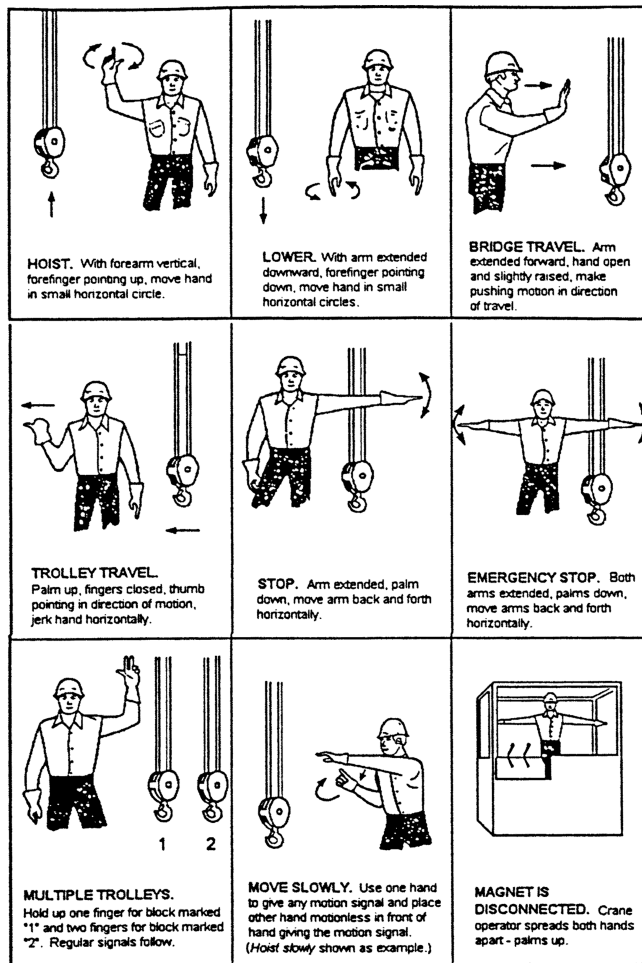
(19) Standard hand signals. When using visual signals, standard hand signals as illustrated below, must be used for directing crane operators.

CRAWLER, LOCOMOTIVE, AND TRUCK CRANES
STANDARD HAND SIGNALS FOR CRANES

 <p>HOIST. With forearm vertical, forefinger pointing up, move hand in small horizontal circle.</p>	 <p>LOWER. With arm extended downward, forefinger pointing down, move hand in small horizontal circles.</p>	 <p>USE MAIN HOIST. Tap fist on head; then use regular signals</p>	 <p>USE WHIPLINE. (Auxiliary Hoist). Tap elbow with one hand; then use regular signals.</p>	 <p>RAISE BOOM. Arm extended, fingers closed, thumb pointing upward.</p>
 <p>LOWER BOOM. Arm extended, fingers closed, thumb pointing downward.</p>	 <p>MOVE SLOWLY. Use one hand to give any motion signal and place other hand motionless in front of hand giving the motion signal. (Hoist slowly shown as example.)</p>	 <p>RAISE THE BOOM AND LOWER THE LOAD. With arm extended, thumb pointing up, flex fingers in and out as long as load movement is desired.</p>	 <p>LOWER THE BOOM AND RAISE THE LOAD. With arm extended, thumb pointing down, flex fingers in and out as long as load movement is desired.</p>	 <p>SWING. Arm extended, point with finger in direction of swing of boom.</p>

 <p>STOP. Arm extended, palm down, hold position rigidly.</p>	 <p>EMERGENCY STOP. Arm extended, palm down, move hand rapidly right and left.</p>	 <p>TRAVEL. Arm extended forward, hand open and slightly raised, make pushing motion in direction of travel.</p>	 <p>DOG EVERYTHING. Clasp hands in front of body.</p>	 <p>TRAVEL (Both Tracks). Use both fists in front of body, making a circular motion about each other, indicating direction of travel; forward or backward. (For crawler cranes only.)</p>
 <p>TRAVEL (One Track). Lock the track on side indicated by raised fist. Travel opposite track in direction indicated by circular motion of other fist, rotated vertically in front of body. (For crawler cranes only.)</p>	 <p>EXTEND BOOM (Telescoping Booms). Both fists in front of body with thumbs pointing outward.</p>	 <p>RETRACT BOOM (Telescoping Booms). Both fists in front of body with thumbs pointing toward each other.</p>	 <p>EXTEND BOOM (Telescoping Boom). One Hand Signal. One fist in front of chest with thumb tapping chest.</p>	 <p>RETRACT BOOM (Telescoping Boom). One Hand Signal. One fist in front of chest, thumb pointing outward and heel of fist tapping chest.</p>

STANDARD HAND SIGNALS FOR CONTROLLING OVER-HEAD AND GANTRY CRANES



[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-79-170, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.010, [49.17].040 and [49.17].050. WSR 99-16-083, § 296-79-170, filed 8/3/99, effective 11/3/99. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-13-053 (Order 81-9), § 296-79-170, filed 6/17/81. Statutory Authority: RCW 49.17.040, 49.17.240, and chapters 43.22 and 42.30 RCW. WSR 81-03-007 (Order 80-31), § 296-79-170, filed 1/8/81; Order 74-24, § 296-79-170, filed 5/6/74; Order 70-6, § 296-79-170, filed 7/10/70, effective 8/10/70.]