



Crane

## Compliance – Resource Bulletin

# Crane Signs

### Overview:

Both the manufacturing and construction industries find it necessary to move large, heavy loads in their daily operations. The various types of “lifting” equipment used present significant safety issues to be considered, both for the operators of the devices and for workers in proximity to them. <sup>[1]</sup>

These safety issues are addressed in the Occupational Safety and Health Administration (OSHA) “Crane Rule” which became effective on 11/8/2010. The Crane Rule regulations are found in the Code of Federal Regulations CFR 1926, Subpart CC “Cranes & Derricks in Construction.”

### Resources:

- OSHA Crane Rule Regulations:** (Free) [http://www.osha.gov/pls/oshaweb/owastand.display\\_standard\\_group?p\\_part\\_number=1926&p\\_toc\\_level=1](http://www.osha.gov/pls/oshaweb/owastand.display_standard_group?p_part_number=1926&p_toc_level=1)
- OSHA Crane, Derrick, and Hoist Safety:** (Free) <http://www.osha.gov/SLTC/cranehoistsafety/index.html>
- ANSI/ASME B30 Construction Standards:** (\$\$\$) <http://webstore.ansi.org/RecordDetail.aspx?sku=ASME+B30.+Construction+Package>
- NCCCO Crane Safety Resources:** (Free) <http://www.nccco.org/OSHARuleResource.html>

### Design of Crane Signs:

- **CRANE TYPES:** OSHA defines a crane as any device that can hoist, lower and horizontally move a suspended load. There are many types of equipment that fall under this definition. The specific safety standards for each crane type were written by the American Society of Mechanical Engineers (ASME). The full standard addresses the construction, installation, operation, inspection, maintenance, and safe use of all crane types. (1926.1401) (ASME B30.1-29)

COMMON CRANE TYPES

- |                   |                     |                     |                     |
|-------------------|---------------------|---------------------|---------------------|
| ○ Tower Cranes    | ○ Pedestal Cranes   | ○ Portal Cranes     | ○ Hoists            |
| ○ Overhead Cranes | ○ Derricks          | ○ Sideboom Cranes   | ○ Cableways         |
| ○ Floating Cranes | ○ Locomotive Cranes | ○ Helicopter Cranes | ○ Material Handlers |
| ○ Monorail Cranes | ○ Container Cranes  | ○ Boom Cranes       | ○ Top Girder Cranes |

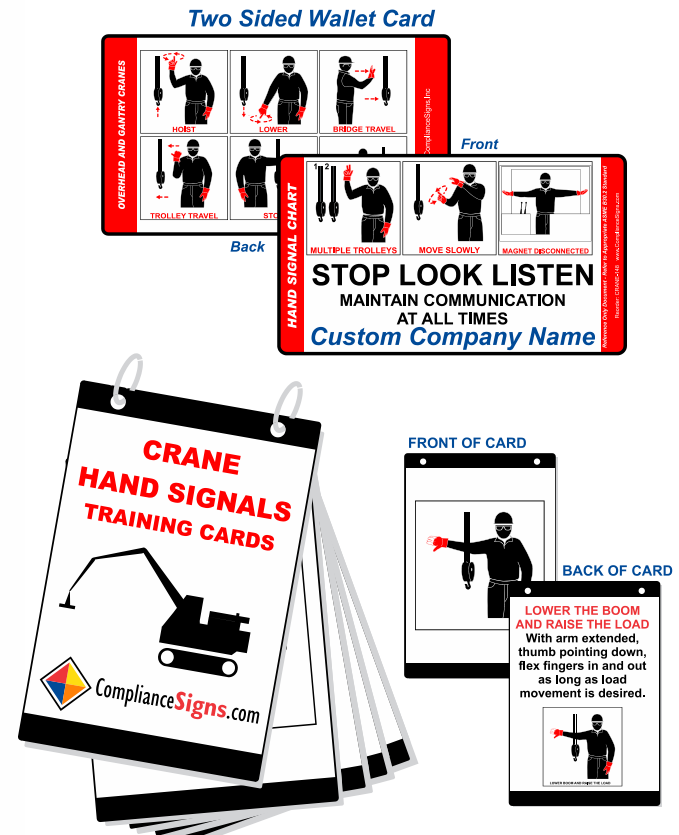
- **CRANE SIGNALS:** Though most cranes are large pieces of equipment, they are operated by a single person, the “operator.” Their size also means the operator is often at a great distance or visually blocked from the load he is moving. This makes a “signal person” a requirement for safe operation of a crane in these situations. The signal person conveys to the operator how he should manipulate the load through either hand, voice, or audible signals. Both the operator and signal person are required to be certified under OSHA regulations. (1926.1419a) (1926.1427,1428)

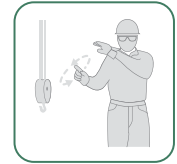
# Compliance – Resource Bulletin

## (Crane Signs Continued)

- **HAND SIGNAL CHARTS:** When hand signals are used to direct the crane operator, OSHA requires that the Standard Method be used. This method is a series of 19 hand signals, each of which describes an action the operator is to take with the crane. OSHA requires that a hand signal chart for the particular crane in use be posted on the crane itself or conspicuously posted in the vicinity of the hoisting operation. It is common for these charts to be customized for a specific crane since not all cranes are capable of the same operations. (1926.Appendix A) (1926.1422) (see graphic aid 1 below)
- **HAND SIGNAL TRAINING AIDS:** Both the crane operator and signal person must be certified in order to use a particular crane. Training for certification is rigorous given the large number of crane types and their corresponding signal menus. Training aids in the form of posters, flip cards and wallet cards depicting the signals and their meaning are a useful reference for crane employees before and after certification. (see graphic aid 1 below)

### Graphic Aid 1:





Crane

## Compliance – Resource Bulletin

### (Crane Signs Continued)

- **OSHA/ANSI CRANE SAFETY SIGNS:** Though not required by regulation, it is common to see OSHA or ANSI formatted safety signs in the workplace or at the construction site providing employees with hazard information pertaining to cranes. ANSI & OSHA both define sign elements for their versions of safety signs, but their differences are so minor that the two standards are both widely used for hazard notification. These signs contain the following elements:
  - **HEADER:** Located at the top of the sign and containing a signal word and sometimes a warning symbol. There are various signal words and associated colors, each of which indicates the severity of the safety hazard.
  - **SAFETY SYMBOL:** Located below the header, there may be a graphic representation of the specific hazard being indicated by the sign. Not all signs contain a safety symbol.
  - **SAFETY MESSAGE:** Located below the header is a text message indicating the nature of the hazard and sometimes the action to be taken to avoid the hazard. (see graphic aid 2 below)

### Graphic Aid 2:

#### ANSI DANGER



#### OSHA DANGER



For Crane signs & labels please visit our store:

<https://www.compliancesigns.com/crane.shtml>

[1] OSHA Crane, Derrick, and Hoist Safety