

▶ *Hanover Risk Solutions*

## Crane Hazards

### Does this apply to me?

Using cranes to load/offload, move and install building equipment/materials is an almost daily job on a construction site. Cranes may be rented for a small job or on-site for many months during larger construction projects. If your company:

- Owns or rents or uses cranes
- Works on construction projects where cranes are actively in use

You will want to make sure your workers understand crane hazards.

### What does this cover?

#### **Crane Inspections**

All cranes must be inspected daily by a Competent Person, typically the operator. Additional documented inspections must be performed monthly and annually and these will be more comprehensive.

#### **Crane Operator Requirements**

Crane operators must be certified by 2017 in all states.<sup>1</sup> Currently some states already require crane operator certification.

#### **Riggers and Signalmen requirements**

Riggers and Signal persons must be qualified. This means they must understand how to determine load weights, inspect and choose the right rigging, know how to attach and control loads.

#### **Crane Set-up and Use**

Ground conditions must be evaluated before crane use along with powerlines and other potential hazards such as buildings/obstructions within the operating area. Keeping other workers out of material

hoisting areas to prevent injury from falling loads or contact with equipment requires planning and communication.

#### **Special operations (barge work, tandem lifts)**

These are considered critical lifts and require comprehensive plans, oversight and training.

#### **Tower Cranes**

Use of Tower Cranes requires that procedures for erecting, climbing and dismantlement are clearly understood and communicated to the work crew. In addition, a registered professional engineer should be used to evaluate structures, support foundations and counterweights.

### What else do I need to know?

As of 2017 every crane operator will have to be certified to operate a crane on a construction site or during construction operations.<sup>1</sup> If cranes are rented it is important to ask about the certification of the operator.

<sup>1</sup>29CFR 1926 Subpart CC Cranes

The owner of the property or General Contractor must evaluate the ground conditions to ensure the surface where the crane will be used can safely support the weight. This includes any subsurface hazards like underground vaults or utilities.

## What about training?

There are several training rules in the OSHA crane standard. Even if workers are not directly working with a crane they should be instructed to keep clear of the swing area, to never enter the lifting area and to never approach a crane that has contacted an overhead powerline. More specific training is required for employees<sup>1</sup> who are:

**Crane Operators**—Must be qualified or certified by an accredited testing organization which include both a written and practical test.

**Riggers**—Must be qualified. This means they will have to be trained in the use of slings and rigging devices and understand concepts such as center of gravity and sling stress loading.

**Signal person**—Must be qualified and understand the types of signals used, whether hand or radio given and also have a basic understanding of crane operation.

**Assembly/Disassembly**—When a crane is assembled, typically a lattice boom crane, the operation must be overseen by an Assembly/Disassembly Director (A/D). The A/D must be both a Qualified and Competent Person who understands the manufacturer procedures for Assembly/Disassembly, rigging capacity and procedures and all other safety considerations of the procedure. The A/D must also provide instructions to the crew before the operation begins.

**Critical Lift Plans**—Due to the hazardous nature of working with two cranes or off barges critical lift plans must be developed and directed by a Lift Director. Workers who are involved with the operation must review the plan with the Lift Director.

## Where can I get more help?

The Hanover Risk Solutions Website has additional materials you can use and the OSHA website has a page that is dedicated just for crane safety information. <http://www.osha.gov/SLTC/cranehoistsafety/index.html>



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