



Tailgate Topic Review

[PP 05/14/2017 - 05/27/2017]

Working Around Heavy Equipment Safety

Heavy equipment is both powerful and dangerous, both for the operator and for those who work around it. It's important that you know the safety precautions to take and when working with and around heavy equipment such as dump trucks, front-end loaders, cranes, tractors and cement trucks.

WORKING AROUND HEAVY EQUIPMENT

- Keep clear of moving equipment
- Never assume the operator knows where you are and where you are going
- Keep an eye out for moving equipment at all times
- Watch out for and stay clear of pinch points, earth-moving equipment and cranes
- If you must walk around a piece of heavy equipment, alert the operator to stop the machine before going by
- Always stay out from under loads on cranes or hoists – even if it means taking the long way around
- Avoid walking behind a piece of equipment or ride on its running board or drawbar in case it slides or turns or the load shifts
- Never ride on top of a truck loaded with masonry blocks or other material that could shift and injure you
- If you're working on portable staging, scaffolds or platforms, get off while the machine is being moved.

STRUCK BY ACCIDENTS

- Struck-by accidents are among the four leading causes of workplace fatalities.
 - 75 percent of struck-by fatalities involve heavy equipment such as trucks or bulldozers.
 - In fact, one in four “struck by vehicle” deaths involve construction workers, more than any other occupation.
 - Most employee injuries and fatalities can be attributed to lack of safe operating procedures, lack of safety-rule enforcement, and inadequate or insufficient training.
- Specifically, a traffic control plan inside work zones and adequate marking of work zones are keys to safety.
- Encourage operators of heavy equipment and construction vehicles to:
 - move equipment only after positive visual contact (seeing each other's eyes) has been made and confirmed
 - with workers on foot always observe jobsite speed limits and reduce speed when workers on foot are nearby
- This information can be used to develop morning safety talks and weekly safety meetings.

SPOTTER SAFETY

- Even if vehicles are equipped by backup alarms, having a spotter is the best way to prevent vehicles from backing over employees.



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- Often there are so many alarms on the sites that employees become used to the alarm sound and they start to ignore it.
- The spotter's main responsibilities are to
 - Look out for himself/ herself
 - Look out for all others on the site.
 - Some tips for the spotter include:
 - Never leave the driver's sight without notifying the operator to stop the vehicle.
 - Always signal in an area the driver can see.
 - Be consistent with hand signals to ensure understanding

BLIND SPOTS & PINCH POINTS

- Recognize and stay away from the blind spots & pinch points of heavy equipment and vehicles.
 - Wear high visibility safety clothing including retro-reflective gloves, arm bands, and other accessories. This is critical under poor lighting and bad weather conditions.

Vehicle Blind Spots

Tools/Attachments on vehicles can create greater blind spots, reduce visibility, or swings that increases the risk to workers being struck or pinned.

Watch out for heavy equipment moving with raised buckets



Be ready for possible sudden movements of booms or changes in direction of equipment operation



Know equipment swing radius (how far can it reach, move or rotate)





INJURY & ILLNESS PREVENTION PROGRAM

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WHAT IS REQUIRED BY CAL/OSHA

Cal/OSHA has a number of regulations related to the safety in construction - found in Title 8 of the California Code of Regulations (T8CCR). **The specific Cal/OSHA safety requirements that apply to your trainees depends on the types of construction activities they will actually be performing.** The following is a brief overview and summary of the regulations in Title 8 related to safety when working around heavy equipment. **Not all of the applicable Title 8 regulations are given below.**

Provide and require employees exposed to vehicular traffic to wear high visibility clothing - [T8CCR 1590\(a\)\(5\)](#), and retro-reflective material [T8CCR 1599\(d\)](#), [T8CCR 1598\(c\),\(d\) and \(e\)](#)

A system of traffic control is required to abate traffic hazards - [T8CCR 1590\(a\)\(4\)](#)

Traffic control must conform with the "California Manual on Uniform Traffic Control Devices for Streets And Highways, September 26, 2006."

Back up alarms must be audible from 200 feet away or flagger in clear view of the operator shall direct the backing operation [T8CCR 1592\(a\)](#)

Equipment operators must be aware of workers on foot - [T8CCR 1592\(e\)](#)

All vehicles must be inspected each work day for malfunctions. All repairs must be made before vehicles are placed in service. - [T8CCR 1597\(j\),1593\(d\)](#)

Seatbelts must be in good working order. Employer shall require the use of seat belts - [T8CCR 1596\(g\)](#), [1597\(h\)](#)

Roll over protection structures (ROPS) on vehicles and heavy equipment must be provided and used [T8CCR 1596\(a\)](#)

Planning

Set up a preconstruction meeting inviting all contractors to discuss ways to coordinate work activities, identify potential hazards, and means to eliminate or reduce them

Develop a process for reviewing incidents and close calls. Identify hazards and ways to correct them

Develop diagrams to show how construction vehicles and heavy equipment will enter, move, and leave the work zone

Design the workspace so that backing up and blind spots are minimal

Establish ways to provide for well-lit work areas

Traffic Control

Prevent unauthorized access to worksite.

Establish parking areas for workers and visitors

Install barricades or other barriers to clearly delineate traffic routes and prevent vehicles from coming into the work zone

Designate a single traffic control person to authorize, monitor, and direct the movement of vehicles including backing up

Provide alternate routes for workers on foot to access the work area, if possible

Authorize the traffic control supervisor to temporarily stop work until traffic congestion is under control or eliminated

Work Safer

Schedule work tasks to keep workers on foot out of areas where heavy equipment and construction vehicles are present whenever possible

Equipment operators many times have to focus on their specific crew and work. Assume they don't see you.

Encourage communication, e.g., hand signals, two way radios for employees assigned to watch for safety in the work zone or employees on foot talking to the equipment operator

Ensure backup alarms, horns on construction equipment are tested daily and function effectively. Instruct equipment operators to use these devices to call the attention of workers on foot



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CSO & GISO Regulations for Cranes in Construction

BCA inspectors will often be assigned to projects that have cranes operating. Cranes have very specific safety rules. In addition there are two primary Cal-OSHA regulations that govern operator qualification and certification.

BCA does not approve operator qualifications/certifications or perform crane inspection. Cranes are very expensive and require highly qualified operators. We expect that owners and operators have too much invested to not provide good sound cranes with qualified operators to ensure that their investment/equipment does not become involved in an accident.

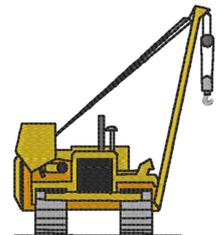
For the purpose of this TSM BCA requires that all inspectors that are assigned to a project that has operating cranes that they observe all safety rules that the contractor has in place. If the inspector witnesses a crane operated in a dangerous manner they should immediately notify the project supervisor.

§5006.1. Mobile Crane and Tower Crane-Operator Qualifications and Certification.

§1618.1. Operator Qualification and Certification.

EXCEPTIONS TO SECTION 1618.1:

- (1) Operator qualification or certification under this section is not required for operation of derricks, side boom cranes or equipment with a maximum manufacturer-rated hoisting/lifting capacity of 2000 pounds or less.
- (2) Operator qualification or certification under this section is not required for operation of articulating/knuckle-boom cranes having a boom length of less than 25 feet or a maximum rated load capacity of less than 15,000 pounds when used to deliver material to a construction site.



National Commission for the Certification of Crane Operators

Q&A CALIFORNIA'S NEW RULES FOR CRANE OPERATOR
CERTIFICATION

Will the state of California issue licenses?

No. The certifications can only be issued by a certifying entity that is accredited by the National Commission for Certifying Agencies (NCCA).

From June 1, 2005, most mobile crane and tower crane operators must hold a valid certification in order to work in the state of California.

Certification is valid for a maximum of five (5) years.