

Mobile Crane Safety

Operating mobile cranes is a common everyday event in the workplace. Cranes are used to lift a multitude of materials in almost every industry in the world. Over the years there have been hundreds of accidents causing severe damage to property and people. NIOSH (National Institute for Occupational Safety and Health) reminds us that, "... industrial workers are frequently injured or killed when working on or around mobile cranes because of tip-over, boom collapse, and uncontrolled hoisted loads." Definitions of the three afore mentioned accidents are:

- Tip Over - This normally occurs when the operator is lifting materials outside of the manufacturer's recommendations for safe lifting capacity, the crane is improperly set up or the crane is on unstable ground.
- Boom Collapse - This can occur when the crane is overloaded, has been improperly assembled or due to faulty equipment.
- Uncontrolled Hoisted Loads - When either tip-over or boom collapse occur, workers can be struck by parts of the crane or out of control loads that have been hoisted.

Both the crane operator and the ground workers are at risk. Electrocution, crane collapse and struck-by object are the leading cause of worker fatalities according to the Bureau of Labor Statistics.

Operators need to pay special attention when performing a critical lift. Some examples of critical lifts are lifting weights that approaches 80-90% of the cranes maximum capacity, crane operation near power lines, two or more cranes simultaneously lifting the same load, personnel are being hoisted, and lifts during high winds. Also, the manufactures capacity rating is based on ideal conditions which may not always be the case. The rating includes the weight of the lifted load and all other accessories (slings, hooks, etc.) used to lift the load.

A few tips for mobile crane safety are:

- Always follow the manufactures specification.
- Do a walk around at the beginning of your shift to make note of any structural, mechanical or electrical hazards.
- Develop a lifting plan and communicate it to all effected workers.
- Conduct proper maintenance on the equipment and check all fluid levels before lifting.
- Always locate the crane on a solid or stable ground that is capable of supporting the extreme weight of the crane and its' load.
- Never override the cranes computer.
- Be aware of all overhead hazards.
- Familiarize yourself with the crane's load charts before operating a new crane.
- Stay alert to weather changes, especially wind, and communicate the lifting plans to additional workers who arrive after the start of the operation.
- Ensure all ground workers are trained and familiar with the lifting plan.
- Remind ground workers to never approach a lifted load and stay out from under the boom in case it should fall.
- Constantly watch and communicate with your ground workers to make sure they do not get under a load or between a load and a fixed object.

Mobile cranes are an important part of our work environment. Stay alert, don't get in a hurry and don't take any chances. Lives depend on your actions.

The information presented in "Safety Watch" has been compiled from sources believed to be reliable. However, it cannot be assumed that all acceptable measures are contained in this article nor that additional measures may not be required under particular or exceptional circumstances, or your own company procedures, or by federal, state/provincial and local law. Local, state/provincial and federal regulations take precedence over this material. Companies should rely on their own investigations and obtain professional advice specific to their needs before using these materials.