

# Standards and Guidelines

## MCO-01

### Mobile Crane Operator Training Guidelines



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**The Association of Crane & Rigging Professionals encourages employers to incorporate the subjects on the following pages into training programs designed for employees who perform crane and rigging activities as a part of their daily tasks. The level and content of this training should be suitable and appropriate for the type of work being performed.**

The ACRP places emphasis on providing training programs which meet the organizations published 10 points of "Excellence in Training". Quality training starts with identifying the needs of the participants, having well established goals for the program, providing thorough instruction, giving suitable question and answer time, implementing knowledge checks, conducting hands-on activities whenever possible and finishing with a summary of the training event. For more information about the ACRP and its special workshops and publication visit [www.acrp.net](http://www.acrp.net)

- 1) **CRANE COMPONENTS:** Employees should be trained to identify crane components and how the cranes depend on the proper performance of those components when lifting and moving loads.
- 2) **CRANE CONTROLS and FUNCTIONS:** Employees should be trained to understand which control mechanisms cause the crane to boom up/down, swing left/right and hoist up/down. The employee should be familiar with the types of controls which they may be called on to operate; hydraulic or mechanical which use some combination of electric or air systems. The employee must be trained in the manual or machine assisted leveling of the crane by means of dirt work, mats or outriggers.
- 3) **PRE-USE INSPECTION:** Employees who will be asked to conduct pre-use operations of mobile cranes shall be trained to complete a visual inspection of a crane's fluid levels, standing and running ropes and their visible end connections, block, sheave and hook condition, basic structural, electrical and mechanical conditions. The employee must be able to evaluate the status of safety devices or operator aids such as anti-two blocking devices and load moment indicating systems. The employee must be able to properly recognize if the machine is properly prepared for the upcoming lift activities including correct counterweight, boom inserts, jib configuration, etc.
- 4) **CRANE OPERATING REQUIREMENTS:** The employee shall understand the applicable federal/state regulations, industry standards, manufacturer's requirements and corporate policies which govern the use of mobile cranes within their facility. The employee will be trained to recognize unsafe conditions which can jeopardize a crane and rigging activity.
- 5) **CRANE SET-UP and SHUTDOWN:** The employee should prove basic ability to set the crane up according to the manufacturer's specifications; considering ground and environmental conditions, overhead power lines and obstructions, tail swing, outrigger placement in relation to subsurface voids and utilities. The employee will demonstrate his/her ability to park the crane in a manner which provides for minimal interference with surrounding activities.

- 6) LOAD HANDLING OPERATIONS:** The employee should be able to operate the crane in its basic function process; boom up/down, swing left/right, hoist up/down and telescope in/out as applicable. The employee must be able to follow hand signals and successfully move a load(s) in a manner which demonstrates good operating practices.
- 7) LOAD CHART INTERPRETATION:** The employee must prove knowledge in the interpretation of the load chart(s) of the crane(s) which he/she will be operating. He/she must demonstrate ability to evaluate the crane's limitation based on its configuration, load handling devices, and how the crane's capacity is affected by boom length, radius and boom angle as applicable.
- 8) RIGGING:** Employees who operate cranes should be trained in basic rigging, weight estimation, sling angles, rigging inspection, sling protection and connection, load stability, rigging hardware usage and taglines.
- 9) LIFTING OF PERSONNEL:** If the employee who operates a crane will be responsible for lifting personnel with a crane, he/she will be trained and tested in the proper sequence, calculations and deductions, and planning processes required by the applicable industry regulations and standards.
- 10) OPERATOR VERIFICATION OF KNOWLEDGE AND SKILL:** The employee should successfully complete a written test(s) and hands-on performance in the proper operation of the mobile crane(s) for which they have been trained.