

Greetings all. Today's topic is: Pick and Carry Crane Safety.

As you may be aware there has been several recent incidents involving pick and carry crane safety, including a recent fatality in Canberra in early August. This bulletin will go over some of the reasons why pick and carry operation can be hazardous and why extra care needs to be taken when operating and working in close proximity to these cranes.



To begin with, these cranes are the most numerous cranes in Australia (5000~ units and 50% of total crane volume) as they are required for a wide range of tasks and often used constantly on a site throughout the day and night. This increases the exposure (and risk) of these cranes to personnel on site. Secondly, the mobilising of loads adds another dimension as operators have to be aware of not only loads moving overhead but also cranes and their load moving into and out of an area they are situated in. The danger is magnified here because the ground on many sites may be unstable or uneven and any sudden movement of the ground or pothole can cause a jolt and swing the load. You will remember the last Bulletin 205, where the dangers of operating at the limit or outside the load chart were explained. Even a pick and carry crane operating within its load chart can run into trouble if a wheel drops into a pot hole or down a gutter/curb. The effect is a swinging load which static load charts do not comprehend, and a resultant side slope is which, when planned for, requires significant deration of up to 60%

depending on the boom length, load and angle. If the operator has assumed the ground was flat, then the load calculations would be based on just that. It is this sudden unplanned side slope caused by the pothole or surface depression that is extremely dangerous and catches out even the most prepared operators. Such an event can also be caused by simply driving off a residential street curb or gutter.

So let's go over how to minimise the risk of operating articulated pick and carry cranes. Here are some points to follow.

1. Ensure operator has specific training in articulated pick and carry cranes, as per CICA's Position paper CICA-PA-0009-B titled "Articulated Crane Operator Requirements".
2. Ensure crane is setup as per operator requirements including correct tyre and tyre pressures.
3. Use a lift plan filled out by the driver that includes crane travel path analysis.
4. Keep boom lengths short and the load as close to the ground as possible.
5. Keep all unnecessary personnel away from the lift and load travel path and ensure path is clear of equipment, materials and other obstructions.
6. Avoid sudden accelerations/decelerations to prevent load swing.
7. Avoid side slopes and follow side slope deration as per the manufacturer's load chart, if side slope is unavoidable.
8. Avoid extra unplanned lifts while on site, unless proper lift plans and checks are completed.

At the end of the day, articulated cranes are safe machines when properly maintained and operated as per manufacturer's guidelines and the Australian standards. Problems tend to arise when training and awareness is insufficient and/or such rules and guidelines are not followed.

Let's make an effort to ensure preventable incidents are avoided. www.cica.com.au