

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

As you may be aware, pick and carry crane safety has been the centre of a number of investigations and a coronial inquiry.

This bulletin will cover some of the reasons why pick and carry operation can be hazardous and why extra care needs to be taken when operating and working near these cranes.

These cranes are very widely used in Australia (5000~ units and 50% of total crane volume) and are required for a wide range of tasks. High utilisation increases the exposure (and risk) of these cranes to personnel on site.

Secondly, the mobilising of loads adds another level of risk, as operators need to be aware of both loads moving overhead but also cranes and their load moving into and out of an area. The risk is exacerbated as the ground on many sites may be unstable or uneven. Any sudden movement of the ground or pothole can cause a jolt and swing the load.

The dangers of operating at the limit or outside the load chart are explained [in this CICA Video](#). Even a pick and carry crane operating within its load chart can run into trouble if a wheel slips into a pothole or down a gutter/curb.

The effect is a swinging load which static load charts do not factor for, and a resultant side slope in 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, purely on that. It is the sudden unplanned side slope caused by the pothole or surface depression that is extremely dangerous and can challenge even the most prepared operators.

How to minimise the risk of operating articulated pick and carry cranes.

1. Training

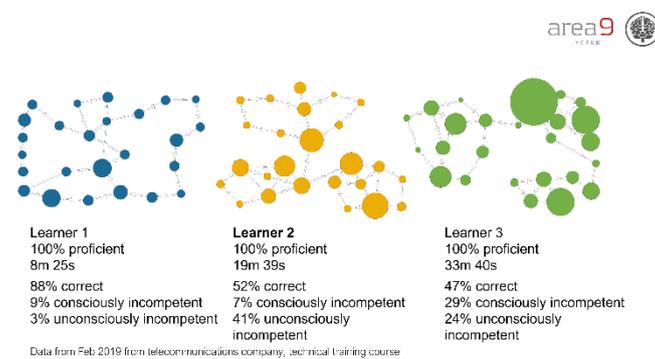
Many seasoned operators have never been assessed.

Because of the high-risk work licence framework, slewing crane licence holders can operate pick-and-carry cranes without any formal training. It is like getting a heavy vehicle rigid licence to operate an articulated crane.

CICA is developing a training program that can assess the operator's familiarity with the driving behaviour of articulated cranes.



For experienced operators, the training and assessment will be accelerated. For inexperienced operators, the training will be more thorough. This variation in training that credits the industry for existing knowledge while providing additional training for those not competent is called Adaptive Learning.



This training will also ensure the operator has specific training in articulated pick and carry cranes, like that specified in [CICA's Position paper CICA-PA-0009-B titled "Articulated Crane Operator Requirements"](#).



CICA – Vic / Tas Branch Crane Safety Bulletin #306 August 2022



2. Crane setup

Ensure crane is setup as per operator requirements including correct tyre and tyre pressures.

3. Planning is key

Plan the lift that includes crane travel path analysis.

4. Boom - short and low

Keep boom lengths short and the load as close to the ground as possible.

5. Clear the way

Keep all unnecessary personnel away from the lift and load travel path and ensure path is clear of equipment, materials and other obstructions.

6. No sudden movements

Avoid sudden accelerations/decelerations to prevent load swing.

7. Mind the side slopes

Avoid side slopes and follow side slope deration as per the manufacturer's load chart, if side slope is unavoidable.

8. Stick to the plan

Avoid extra unplanned lifts while on site, unless proper lift plans and checks are completed.

Articulated cranes, when properly maintained and operated as per manufacturer's guidelines and the Australian standards are useful machines. Problems tend to arise when training and awareness is insufficient and/or such rules and guidelines are not followed. Preventable incidents are avoidable.

Stay Safe - CICA