

Greetings all.

In 2017 I wrote Bulletin 212 about the safe operation of boom support dollies on mobile cranes while driving on our public roads. The primary focus of the bulletin was to reinforce the awareness that the modern mobile crane is not designed specifically for dolly transport configurations and requires an extra level of care and awareness during operation.



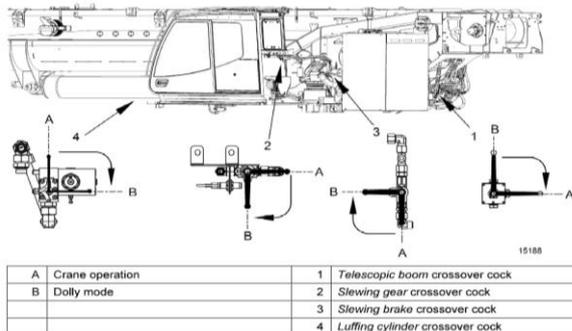
Since then there have been two significant and ongoing changes in the mobile crane access sphere.

1. Substantially more large cranes on the Australian road network carrying boom dollies.
2. An increase in ‘heavy configuration access’ where crane-dolly combinations have been able to operate at 12t per axle without dollies on certain routes.

The net effect of these changes is an increase in the switching from boom dolly travel mode to normal travel mode. Not using a dolly is preferred for a multitude of reasons but there are some areas where a reduced axle weight requires a dolly to be used.

With the proper training and inductions, operators can easily alter the configuration for the chosen mode of transport on any given day.

The main thing to note is that in the dolly travel mode, the slew ring acts as an articulation point and needs to freely pivot as the vehicle turns a corner. This is referred to as ‘free slew’.



Secondly the luffing cylinder needs to be unlocked to allow slightly ‘negative’ or downward boom angles where the crane travels over a rise or abrupt transition to a downward slope. Without unlocking, scenarios could otherwise result in the front axles becoming unweighted which directly effects the handling characteristics of the crane, particularly during cornering. Remember, that axle loads on a crane carrier with dolly in tow, are already up to 40% lower yet GVM and linear forward momentum have increased by 5t at a minimum, when traveling with a dolly. Further axle weigh reduction may present a challenge in maintaining a responsive turn-in characteristic especially in wet weather.

Thirdly, for the same reasons that boom dollies are required, the luff cylinder is often pressurised to further balance axle weights by exerting a downward force on the dolly which transfers weight from the rear axles of the carrier to the dolly’s axles. The correct pressure in the luffing cylinder is crucial to match the declared axle weights that are usually established at the initial weigh and measure inspection prior to registration.

The key to frequent, safe and successful reconfiguring of the crane is to understand, comprehend and implement the procedures supplied by the manufacturer. It’s important to follow these religiously, as any missed steps or errors can have significant consequences to personnel, equipment, the public road users and the valuable infrastructure we are privileged to travel on. But it’s not difficult and operators handle complex lifts successfully every day.

All drivers of cranes should be licensed and competent to not only drive the machines on the public road in the desired configurations but to also be competent (preferably the riggers and doggers too) in facilitating complete, correct and consistent reconfiguring when needed. CICA has 2 programs, [CrewSafe](#) and [StartSafe](#), which could be used to ensure the operators are adequately competent to manage any reconfigurations as part of the overall verification and to ensure the necessary prestart checks are completed on the crane before it leaves the yard and ventures out on the public road. There are many other products and programs in the market that also fulfill these requirements.

We owe it to the road managers to make sure our cranes are setup and balanced according to the issued permit or gazette. We owe it to the public to ensure our cranes are safe on the roads and we owe it to our operators and their families to make sure they make it home safely on the road after a safe and successful day’s lifting.

Stay Safe, CICA