

Greetings all, Today's bulletin is about precast panel erecting.

Working with or around precast concrete panels is a high-risk operation. The collapse of any concrete panel, even a small one, can have catastrophic consequences for workers or the public. Recent accident statistics have a high representation of incidents involving precast elements. I have prepared a list of the Top 6 causal factors of incidents involving this kind of lift. It's not all in the Craneage either...

Clutch and Insert Compatibility. It's very easy to turn up on site with the wrong clutches. Take the time to ensure the crew heading to the job has compatible clutches for the lifting inserts cast into the elements to be lifted.

Incorrect Rigging for Panel Rotating. Load equalising snatch blocks are crucial and, along with the chains and shackles, need to be of sufficient capacity and correctly tagged with up to date inspections.

Panel Birth Certificates and Shop Drawings need to be provided and reviewed prior, to confirm lifting points, masses/dimensions, curing time and the need for strong-backs. Rightly or wrongly the crane company will bear the brunt of flak if a panel breaks mid lift. Beware; sometimes panels are designed incorrectly and are inherently unstable! If in doubt don't lift.



Tail-swing Clearance and Crane Setup Sufficient clearance to slew is obvious, yet often overlooked. The panel installation sequence and position of temporary panel bracing, (props) often causes issues here. Also, the Crane needs to be of adequate capacity with a current Cranesafe Green Sticker and set up on suitable ground with adequate timbers or mats.

Panel Trucks need to be positioned in line with the crane boom to allow for rotation, with the skids/legs lowered to provide stability. Stacking or sequencing needs to be in the right order, alternating from side to side so the trailer is not unbalanced at any stage of unloading. If the trucks are not positioned correctly a second crane should be bought in rather than

attempting to horizontally rotate the panels which will sideload the sheaves on the boom.

Temporary Leaning. If the panel sequencing is wrong, NEVER lean a panel on the crane or another structure. The panel should be properly positioned elsewhere on dowels and braced, as per a normal installation.

While these are obvious points, they are often overlooked. So, what's the best way to ensure this doesn't happen? In a Word.... PLANNING. It all comes back to a good Lift Plan and site-specific SWMS that captures the multiple High Risk Work Triggers:

- Involves tilt-up or precast concrete (obviously)
- Has a risk of a person falling two metres or more
- Requires temporary support to prevent collapse
- Movement of powered mobile plant
- Adjacent to roadways.

The site should be inspected with the builder or supervisor well in advance to determine.

- Trenching and backfilling hazards and the need for geotechnical ground studies
- Other works occurring on the day of lifting
- Electrical hazards and site constraints
- Propping and access issues (see future bulletin)
- Material delivery points and orientation

If you have this information right from the start, then many of the issues I mentioned previously are avoided or mitigated early.

While many problems originate outside a crane crew's sphere of influence. We fail in our duty of care when we try and 'make do' with a less than ideal situation that we detected far too late.

This bulletin cannot possibly cover every detail of precast erection, its intent is to highlight the more common oversights. Every incident is preventable and as my last bulletin pointed out, we need to be wary of making economic or efficiency decisions rather than safety decisions when we are presented with an unforeseen hazard. Here are some useful links:

[WorkSafe Vic Checklist for Erecting of Concrete Panels](#)

[WorkSafe Vic – Precast and mobile Cranes](#)

[Concerns About Precast Panels](#)

Stay Safe -CICA