## Standard Operating Procedure

**Tasks** | **Potential Hazards** | **Action Procedure**
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**CRANE SELECTION** | Crane not suitable for lift | STOP – Do not continue with lift. Refer back to the lift plan.|
1 | Lift weight is unknown or too large | Routine Mechanical / Electrical checks done. Crane functions, safety devices, anti-two block, sheaves, hooks, ropes boom checked and serviceable |
2 | Lift radius is outside range of crane | Check that lifting chains, blocks, scissor lift, rigging and slinging gear, and all hand tools are in working condition and are within the SWL for the lift. Also within the current period |
3 | Crane Defective | Check the item is positioned, assembled, supported and braced in a safe and stable manner. |
4 | Inadequate or faulty auxiliary equipment | Clean crane windows. Check load lone of sight for both pick-up and placement. Provide supplementary lighting. Provide competent spotter. |
5 | Inadequate knowledge, skill or experience | Only those authorised may access lift site. Does not start lift until site is clear of unauthorised personnel |
6 | Inadequate Personal Protective Equipment | Ensure all those involved in the lift have the necessary competency and experience. Check COC / Licenses as required. Brief all those involved. |
7 | Manual Handling | Use correct lifting techniques. Do not overstretch. Use other workers to help with lift. Wear protective clothing. Slow gear correctly. |
8 | Dehydration, Sunburn, Fatigue | Consume 1 litre per hour of water during hot weather. Wear head cover and sunglasses in sunlight. Take shaded rests. |
9 | Poor visibility – poor lighting | Clean crane windows. Check load lone of sight for both pick-up and placement. Provide supplementary lighting. Provide competent spotter. |
**PERSONNEL** | Unauthorised access | Only those authorised may access lift site. Does not start lift until site is clear of unauthorised personnel |
10 | Overhead power lines | Have power supplies isolated or plan so you stay outside the “Exclusion Zone”. Refer to the crane operations procedure before continuing. |
11 | Other obstructions, overhead, at ground level, underground services and excavations | Remove obstructions or reposition lift. |
12 | Environmental factors – Degradation / Pollution | Spill kits found in each crane to be used when required. |
13 | Tripping, falling, hazards, falling objects, dropping into water. | Clean lift site, of debris. Keep work area clear of rubbish and obstructions. Implement drop zone. Use tool straps. |
14 | Unforeseen hazards | Check site for anything unusual. Consider the need for using an observer / spotter. |
15 | Working at Heights, falling into water where there is a risk of drowning. | Where there is a risk of any fall, at any height, from one level to another appropriate fall protection must be used. |
16 | Crushing from crane movement | Always stay out of the path of a moving crane. |
17 | Uneven, unstable ground and crane instability | Level ground. Ensure group is as even as possible, and of a stable nature throughout the entire lift area. Check tyre condition pressure. Do not exceed the lifting capacity of the tyres or crane. |
18 | Inadequate communications | Check and test communications to be used. Radio – hand signals – whistles – flags – other |
**THE LIFT** | Unsupported Load | Check the item is positioned, assembled, supported and braced in a safe and stable manner. |
19 | Unstable Load | Identify the centre of gravity of the load. Allow for boom deflection |
20 | Incorrect / unsafe rigging, slings, chains & shackles | Confirm the correct SWL for all rigging and lifting gear. Inspect and confirm equipment is in safe working order and current tag period |
21 | Incorrect fitting of rigging / slinging gear | Confirm rigging and lifting gear is fitted correctly. Ensure provision is made to protect the load from damage and the load does not damage the rigger and lifting gear. |
22 | Confirm radius and boom lengths | Position the crane in the position it will be in for the actual lift (if required). See Lift Plan. |
25 Initial Lift
Load lifted clear of the ground or resting surface. Rigging / lifting gear re-checked along with the cranes stability and SWL.

26 Unforseen Hazards
Recheck for hazards. Correct as required. When safe to do so, confirm lift can proceed.

27 Movement of load in windy conditions
Confirm wind strength will not place the load and crane in an unsafe position. Attach tag lines if applicable. Postpone lift if wind is too strong.

28 Load being welded while on crane
Isolate crane hook from the load using soft slings or isolating devices.

29 Multiple Crane Lift
Appropriate percentage added to centre of gravity of load for each lift. De-rate crane appropriately (See Lift Plan).

30 Design Lift
Each design lift shall be subject to its own unique lift plan.

31 Crushing / Pinch Points
Stand clear of load, stand clear of moving crane/s, prevent load swing and don’t stand between the crane / load and a fixed object.

32 Incorrect placing of load
Ensure load is placed in / on a stable, secure place. Secure / check load as necessary. Release weight slowly to account an load settling movement.

33 Restricted access to release rigging gear
Plan lift to ensure access for release rigging gear and securing load without the risk of being crushed.

34 Rigger gear or hook catching release
Direct rigging and lifting gear until it is clear of the load or any other grab points.

Category 1
Any lift involving any lift that is not a Category 2, 3, or 4 lift. Non Slew, Vehicle loading, Gantry Cranes, Forklifts, Mechanical lifting devices such as chain and lever blocks, winches, jacks and hoists. Any lift that requires the judgment of a competent person of a higher qualification than a Dogger is not a category 1 lift. General Lifting Only.

Category 2
Any single slew crane lift that is less than 90% of the crane chart WLL for that lift and is not a Category 3 or 4 lift. Any man box work involving a crane. Any lift including those in Category 1 that are directly related with, or include other work that requires other authorities to work; e.g. working at heights, hot work, confined space entry hazardous work, closing road ways, plant isolations.

Any dual crane lift that is general lifting that meets the following:
1. The load share between the cranes does not change.
2. Rated capacity of the crane chart does not change during the lift.

Category 3
Any lift that is greater than 90% of the WLL of the crane and is not a Category 4 lift. Any lift that involves the use of a high voltage permit. Any lift that involves switch rooms or other delicate / fragile electrical equipment. Any lift where the load centre of gravity is difficult to determine. Any lift where the load centre of gravity may change when moved.

All multiple crane lifts that are not a Category 4.
1. The share between the cranes may change.
2. Rated capacity of the crane chart may change during the lift; slewing, winching, luffing and or boom length changes.
3. Load centre of gravity is difficult to determine.
4. Load centre of gravity may change when moved.

Category 4
A category 4 lift is a lift that is defined as a designed lift. Any lift that is greater than 100% of the WLL for that lift that require temporary reclassification of the cranes rated chart capacity. Any lift where the load centre of gravity is difficult to determine and relies on complex calculations to determine the centre of gravity. Any lift where an Advanced Rigger is required to perform the rigging operations may be a category 4.

A category 4 dual and multiple crane lift that is defined as a design lift. Any lift that is greater than 100% of the WLL for that lift that require temporary reclassification of the cranes rated chart capacity.

Any dual and multiple crane lift where the load centre of gravity is difficult to determine and relies on complex calculations to determine the centre of gravity. Any lift where the load centre of gravity may change when moved and relies on complex calculations to determine the centre of gravity. Any lift where an Advanced Rigger is required to perform the rigging operations may a category 4.

Operations: Ph: 0400 878 317
Mail: PO Box 4466, Mackay South 4740
Standard Operating Procedure Completed By: Matthew Brown
Version 1.0 (Valid from 01/01/2014 to 31/12/2014)
E-mail: procrane@bigpond.com
www.procraneqld.com.au