

Climbing Safety-Tower Crane

During tower crane operations, assembly and dismantling presents the greatest risk for major incidents and serious injuries to occur. This is especially true when climbing, sometimes called jacking, takes place.

Many incidents over the past few years demonstrate that climbing tower cranes requires a high level of skill and must be strictly planned, controlled, and supervised.

Planning

- Start planning the assembly and removal of the crane as early as possible.
- Use the planning process to identify risks and allow sufficient time to develop necessary precautions and safe work systems.
- Ensure anchorage points for access to temporary or permanent locations are installed before climbing.
- Prepare a risk assessment and detailed method statement that includes the general risks of climbing as well as those generated by other activities and weather conditions.

A risk assessment typically includes:

- Details of the climbing crew that documents their training, experience, and site orientations.
- Relevant installation instructions/specifications.
- Details of all equipment used, weather limitations, exclusion zones, contingency or emergency plans.
- Records of the inspection and maintenance of all required climbing equipment.

On-site meeting prior to climbing

An on-site meeting must be held prior to the climb to ensure that all arrangements are in place and the safe work systems are still relevant to current site conditions and risks.

Climbing the frame

Make final adjustments:

- Check the setting of the guide rollers.
- Check the hydraulic pump and systems.
- Secure new mast section head to the climbing frame.

Balancing the crane

Ensure the crane is balanced at the centre of gravity by:

- Suspending a known weight at a known radius or angle or combination of angle and load.
- Adhering to manufacturer limits for radii or luffing angles.
- Securing the crane on the climbing frame.
- Checking the gap at the jointer each corner top head.
- Evaluating wind speed.
- Ensuring climbing vertically.

For additional information, please refer to the WorkSafeBC Bulletin "Top-climbing a tower crane: Ensuring safe assembly and dismantling":

<https://www.worksafebc.com/en/resources/health-safety/hazard-alerts/top-climbing-tower-crane-ensuring-safe-assembly-dismantling?lang=en>

Project:

Address:

Employer:

Supervisor:

Date:

Time:

Shift:

Number in crew:

Number attending:

Other safety concerns or suggestions:

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Record of those attending:

Name: (please print)	Signature:	Company:
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

Manager's remarks:

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Manager:

(Signature)

Supervisor:

(Signature)

For more information on health and safety requirements for crane operations in B.C., refer to the *Workers Compensation Act* and the OHS Regulation at worksafebc.com.