

TOOLBOX TALK

Crane & Lifting Operations

WHY THIS MATTERS

Crane accidents kill approximately 90 workers every year. Overloading, contact with power lines, dropped loads, and crane tip-overs cause catastrophic injuries and death. Every crane lift is a critical operation — one mistake can be fatal for multiple workers.

90

Crane-related deaths per year

50%

Of crane deaths from contact with power lines

100%

Crane accidents are preventable

5 Essential Rules for Crane & Lifting Safety

Every lift is a critical lift — apply these rules without exception:

1

NEVER EXCEED THE LOAD CAPACITY

Know the crane's rated capacity at every radius. Use load charts. Never guess the load weight.

2

PLAN EVERY LIFT

Develop a lift plan: load weight, rigging, radius, ground conditions, wind, and swing path.

3

NEVER WALK UNDER A SUSPENDED LOAD

Establish a barricaded exclusion zone beneath every load. No workers in the swing path.

4

MAINTAIN SAFE DISTANCE FROM POWER LINES

Minimum 10 ft (3 m) from lines up to 50 kV. Greater distance for higher voltage. Use a spotter.

5

USE QUALIFIED PERSONNEL ONLY

Certified operator, trained rigger, designated signal person. Each role is critical and mandatory.

Before Every Lift — Critical Checklist

- Has a lift plan been developed and communicated to all involved?
- Is the crane inspected, certified, and load chart available?
- Are the rigging, slings, and hardware inspected and rated for the load?
- Is the exclusion zone barricaded and all workers clear of the swing path?
- Is safe distance from power lines confirmed with a dedicated spotter?

Pre-Lift Inspection — Before Every Operation

- Load chart:** Verify rated capacity at planned radius. Account for rigging weight. Never exceed 85% capacity.
- Rigging/Slings:** Inspect wire rope, synthetic slings, shackles, and hooks. Remove any damaged or worn components.
- Ground conditions:** Level, firm ground under outriggers. Use timber mats. Never set up on soft or sloped ground.
- Wire rope/Hoist:** Check for broken wires, kinks, corrosion, or bird-caging. Inspect drum and sheaves.
- Safety devices:** Test LMI, anti-two-block, boom angle indicator, and load moment limiters before operation.
- Communications:** Confirm hand signals or radio frequency with operator. Only one designated signal person.

Common Mistakes That Kill

- ✗ Exceeding the load chart — overloading is the #1 cause of crane tip-overs and collapse
- ✗ Swinging loads over workers — one dropped load kills everyone underneath
- ✗ Operating near power lines without a spotter — electrocution kills instantly on contact
- ✗ Side-loading the crane — pulling loads sideways collapses the boom and tips the crane
- ✗ Lifting in high winds without stopping — wind adds force that exceeds rated capacity

Safety Tips to Remember

- ✓ Plan every lift — no lift is routine, treat each one as a critical operation
- ✓ Tag lines on every load — control the load, prevent spinning and swinging
- ✓ Never leave a suspended load unattended — the operator must stay at controls at all times
- ✓ If in doubt, don't lift — stop the operation and reassess before proceeding
- ✓ Communication is everything — clear signals between operator, rigger, and signal person

Discussion Questions for Your Team

1. What crane operations are planned on our site today?
2. Has the lift plan been reviewed with all involved personnel?
3. Are power lines identified and safe distances confirmed?
4. Who is the designated signal person for today's lifts?
5. What would you do if you saw someone walking under a suspended load?

TOOLBOX TALK SIGN-OFF

Date: _____ Supervisor: _____

Project: _____ Location: _____

Attendance sheet attached: Yes