Lifting and slinging (also known as load lifting and rigging) comes with inherent dangers. Some of these include: failure of equipment; failure of slinging method, dropped or unstable loads; swinging loads; contacting overhead hazards or other structures and plant; failure of supporting structures like bridges and suspended slabs; or lack of ground bearing capacity. All of these can lead to serious injury or death.

Lifting equipment can include:
- lifting chains, wire ropes and soft slings, chain blocks, turfors, winches, jacks and equalizing gear
- eyebolts, shackles, rudd lifters, lifting clutches
- spreader & lifting beams
- a crane (tower, mobile or crawler)
- vehicle mounted loading crane forklifts & telehandlers fitted with jibs
- crane hoisted material cages and man cages

**The risks of lifting and slinging**

Lifting and slinging must always be planned. There are multiple ways to rig and lift loads. These include using cranes or other load handling devices. You must first consider:

- environmental conditions (wind speeds, ground bearing etc)
- overhead and below ground hazards such as power lines and sewer lines etc
- the destination of the load and working radius for the crane
- visibility of operator/ line of sight

**IDENTIFY the best way to lift the load**

This toolbox talk is intended to help start a health and safety conversation and raise awareness about lifting and slinging. It is not designed as a complete risk management tool for the activity.
• locations of structures, plant, roads, public and other work groups
• counterweight swing area
• the shape, size and weight of the load, the working load limit of the equipment being used – is it adequate for the task?

Other things to think about:
• is the lift a non-standard or complex lift?
• do you have a lift plan?
• does the load have certified lifting points?
  If not is the rigging arrangement suitable?
• will the load swing or fail when lifted?
• the position of bights or reeves
• is the lifting equipment free from damage and fit for purpose?
• do the slings need protection from sharp edges or bends?
• can the load flex, bend or collapse?
• where will you attach the tag line?

ASSESS the condition of slings

Ensure the slings being used are fit for purpose – the majority of accidents associated with lifting equipment are caused by poor rigging, such as overloading or an unbalanced load which ends in the load falling or tipping out of control. Some key things to remember:

• the slings must be suitable for the load and in good condition, check for tears, burns, knots or chemical damage to soft slings or excessive wear*, corrosion, cracks, bends or stretching on links, catches and ‘O rings’ for chain slings etc. before use
  (*wear on chain links to be no more than 10% of the original chain thickness.)
• check that the slings have been inspected and have not been modified from their original form without re-certification
• check that the working load limit is clearly marked on the slings along with a unique identifying number
• the rigging of the load to the crane or lifting device should be secure, balanced and stable, you can conduct a test lift to check
• no part of the sling should be overloaded
• slings should not be shortened with knots, bolts or makeshift devices, nor should they be twisted
• don’t overcrowd crane hooks, keep the weight of the load in the bowl of the hook. Don’t hammer down choke hitches.

MANAGE communication with everyone on site

Only trained and competent people should supervise and carry out lifting and slinging work. If untrained people get involved in the process, it can lead to serious injuries.

It’s important there is an exclusion zone marked out surrounding the operating and lifting area. Visual and audible alarms are also a good way to warn people to clear the area prior to the start of the lift. Under no circumstances should anyone pass or stand underneath a load.

Those carrying out the lifting and slinging operations must consider how they can communicate effectively with each other. Using radios and hand signals to communicate is common practice – radios are particularly useful where the load is not visible to the operator at all times, however you must first assess the risk of carrying out blind crane operations and implement effective controls. A dedicated crane channel should be used in these circumstances. Standard hand signals should be given by one designated person only.

Where do we get more information?

The Safety Charter’s Critical Risk Lifting and Slinging webpage has much more information and is regularly updated. You can view it here or by clicking on Improve Health & Safety – Critical Risks – Lifting and Slinging from the homepage.

If you want toolbox talks on the other 12 critical risks you can check them out online.

Employee issues raised:

Date to be resolved by:

This toolbox talk was written with information from WorkSafe New Zealand, Corbel, Tarmac.com and NPCA.com. Thank you.