

Safe Work Instruction

Overhead Cranes and Lifting Equipment



RESPONSIBILITIES:

Crane Operators:

- Crane Operators shall ensure that they have the appropriate training and skills to operate the crane in a safe manner.
- Crane operators have the responsibility for pre and post lift inspections and generally have control over the crane operation.
- They shall ensure there are appropriate restrictions to access of the area by persons not involved in the lift.
- The crane operator shall ensure that the “correct slinging and lifting procedures are undertaken” and check this with the Dogman,
- Report to the Supervisor if there are any maintenance needs.

Dogman:

- Ensure that they have received appropriate training and carry the appropriate high risk work licence;
- Ensuring that the lifting of any materials shall be done so in a safe manner;
- Calculate the load (mass, shape and centre of gravity of the load) to be lifted;
- Assess the appropriate safe lifting technique including the type and suitability of slings, chains, spreader beams or equaliser beams, connection points and grips and shackles; and
- Inspect the lifting gear prior to use to verify that that it is in good order and if not, remove it from service.

PRE OPERATIONAL SAFETY CHECKS:

Note: This safe operating procedure sets out guidelines for routine lifts with overhead cranes and hoists. If a load does not have fixed lifting points and is not the subject of pre-approved routine work and / or the weight of the load is unknown, a dogman shall be consulted to provide direction on safe methods to lift.

The checks shall include checks on:

- The Hook (look for cracks, gouges, excessive wear and a correctly operating latch).
- The Block (check that block is level and free from damage, wear or looseness in assembly or fittings).
- Crane Chain (Elongation of links, deformation of links, cuts, dents or gouges, cracks, excessive wear, excessive corrosion and twists).
- Crane Rope (Kinks, twists, bird-caging, broken wires, excessive rust or corrosion, excessive wear or abrasion).
- Hoist Drum (Smooth Operation, no overlapping ropes, no oil leaks from motor).
- Safe Working Load – ensure they are clearly marked on the crane and all lifting gear.
- Controls - ensure all buttons are operational; check multiple speeds and emergency stop.
- Lifting Gear – Check all shackles, flexible wire rope slings, web slings (for wetness, mould, tears, failed stitching, burns and UV damage).
- All of the lifting gear above shall have the SWL displayed and have a colour-coded tag attached by the service technician. Operators shall check that the date displayed on the tag is current. New items do not require a tag but shall be made available for the next scheduled inspection.
- Hoist Brake – lift load approximately 300 mm and check for creep.

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POTENTIAL HAZARDS:

- Load shifting, falling or striking a person.
- Contact with live electricity.
- Failure of crane or lifting gear.
- Selection of incorrect lifting gear.
- Slips, trips and falls.
- Crush between floor and the load.
- Non-qualified personnel operating and / or using the crane or lifting gear.
- Load contacting persons or equipment.
- Misuse of crane and / or equipment.
- Spillage of load.

OPERATIONAL SAFETY PRACTICES (CONTROLS):

General:

- Ensure load is within SWL of crane and lifting gear.
- Continuously check for area Specific Hazards. These may include:
 - waiting for pedestrians or mobile vehicles to leave the area of travel;
 - warning signs and barriers;
 - lighting;
 - traffic control;
 - Personal protective equipment.
- When attaching D Shackles do not over tighten. Finger tight and back off ¼ of a turn.
- Hooks on chain slings should always face outwards.
- Always take the slack out of the lifting gear before lifting load. Avoid shock loading.
- Control buttons should be used smoothly throughout the lift.
- Always perform a direct lift, i.e., that the crane hook is directly above the centre of gravity of the load.
- If the load does swing, correct it by moving the load in the direction of the swing when it is at the end of its arc – if it is safe to do so, i.e., no potential to hit people or equipment.
- Always keep the load as close to the ground as possible. Never raise the load any higher than necessary.
- Never allow anyone to walk under or place any part of their body under a raised load at any time.
- Keep unnecessary personnel out of the area when lifting. If necessary use barricading or a spotter.
- Always keep the load in clear view. If this is not possible the lift shall be carried out with the aid of another person familiar with crane's operation, working under the operator's instructions
- A Crane Operator must pay attention at all times. Never talk to, distract or approach a Crane Operator during a lift.
- If handling hazardous materials the operator shall be familiar with the SDS, and the location of eye wash stations and emergency equipment in the event of a spill as covered in Inductions.
- Never leave a load suspended and unattended.
- If you need to leave a load, lower the load and chock at ground level.

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- Use of mobile phones and other communication equipment shall not be permitted during a lift unless used as a part of the communication between the operator and the dogman as part of the approved lift procedures.

Non Routine Lifts:

Before carrying out any non-routine operation with a crane, a risk assessment must be undertaken in consultation with a qualified dogman. The assessment shall be in writing and shall take into account the following:

- The lift to be carried out;
- The range of methods by which the lift can be done and the appropriateness of using the crane rather than a safer method;
- The hazards involved with the lift and the associated risks;
- The equipment to be used for the lift such as slings, spreader bars and hooks with appropriate ratings;
- The proposed route of travel while a load is suspended;
- The clear space and location of setting down the load;
- The possibility of persons entering the lift zone;
- The location and type of warning signs and barricading;
- Exposure to energised equipment
- Emergency procedures;
- Any other activities that may be occurring in the space that could pose a safety risk.

SHUTDOWN & HOUSEKEEPING:

- Lower any raised load to the ground. Chock if required.
- Disconnect hook from the load.
- Remove all lifting gear from load, i.e., slings, shackles, etc.
- Raise crane hook up to near maximum height to protect chain / rope from corrosion, etc.
- Locate the crane to a safe position – to the far end of a building is the preferred position.
- Ensure that pendant / remote control is in off position and place in a designated area – shackle box is ideal.
- Turn power off at main isolation switch.
- Place all lifting gear in a designated area – this should be a rack that is off the ground, out of the weather and direct sunlight.
- Lifting gear should be checked while placing on rack.
- Any defects shall be reported to the Workshop Supervisor as soon as possible