

LIFTING OPERATIONS AND LIFTING EQUIPMENT

Work description: Work involving lifting and the use of lifting equipment

Scope: Lifting equipment includes any equipment used at work for lifting or lowering loads, including attachments used for anchoring, fixing or supporting it.

References:

- U.S. Occupational Safety and Health Administration (OSHA) Occupational Safety and Health Standards for General Industry contained in Title 29 of the Code of Federal Regulations Part 1910 (29 CFR 1910) (§1910.179)
- State of Hawaii - Development Occupational Safety and Health Section (HIOSH) - Hawaii Administrative Rules Title 12, Department of Labor and Industrial Relations Subtitle 8, Hawaii Occupational Safety and Health Division Part 2, General Industry Standards Chapter 60 (§12-60-2(b) Safety and health programs.)

PPE and precautions

As per Risk Assessment

Competencies or qualifications

OEM Training, Qualified Rigger

Licenses or permits required
Tools and equipment required

Note
Working with any machinery can be dangerous because moving machinery can cause injuries in many ways:

- *People can be hit and injured by moving parts of machinery or dropped or ejected material. Parts of the body can also be drawn in or trapped between rollers, belts, chains and pulley drives.*
- *Sharp edges can cause cuts and severing injuries, sharp-pointed parts can stab or puncture the skin, and rough surface parts can cause friction or abrasion.*
- *People can be crushed both between parts moving together or towards a fixed part of the machine, wall or other object, and two parts moving past one another can cause shearing.*
- *Equipment or attachments can become unreliable and develop faults due to poor or no maintenance, or machines may be used improperly through inexperience or lack of training.*
- *Parts of the equipment may fail and loads may drop*

Equipment Safety

All

Do...

- Check the equipment is well maintained and fit to be used, i.e. appropriate for the job, working properly and all the safety measures are in place;
- make sure all parts, including attachments, can accommodate the load weight;
- Ensure that the equipment has valid certificates and that operators have valid certificates to operate the equipment – only trained operators may handle lifting machinery.
- use the equipment properly and in accordance with the manufacturer's instructions;
- wear the appropriate protective clothing and equipment, required for the machine, such as safety glasses, head protection and safety shoes.

Don't...

- use equipment that has a danger sign or tag attached to it. Danger signs should only be removed by an authorized person who is satisfied that the equipment or process is now safe;
- remove any safeguards, even if their presence seems to make the job more difficult;
- wear dangling chains, loose clothing, rings or have loose long hair that could get caught up in moving parts;
- distract people who are using equipment

Before Attempting a Lift

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- Verify the weight of the load
- Locate and rig according to the loads center of gravity (Qualified Rigger)
- Verify overall dimensions of the load
- Check location and quality of approved lifting lugs / lift points
- Select and inspect the appropriate rigging gear to suit the lifting points. Use correct sling method calculation to rig (Qualified Rigger)
- Check for height restrictions
- Perform Risk Assessment – ensure external impacts are included e.g. congestion, traffic (foot and vehicle) and stabilized ground issues
- Create and review Lift Plan (simple documentation to include boom length / angle, radius of swing, gross capacity, net load weight and travel path)
- Erect barricade (human or otherwise) to prevent unauthorized entry into the lift area
- Share this information with the whole crew involved
- Make lift

Approved By:

☐ Director, Operations and Maintenance

☐ Department Manager

☐ Manager, HSE (Operations and Maintenance)

Signature:

Date:

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Lifting Safely

All

Do:

- use only certified lifting equipment, marked with its safe working load, which is not overdue for examination;
- make sure the load is properly attached to the lifting equipment. If necessary, securely bind the load to prevent it slipping or falling off;
- before lifting an unbalanced load, find out its center of gravity. Raise it a few inches off the ground and pause – there will be little harm if it drops;
- use packaging to prevent sharp edges of the load from damaging slings and do not allow tackle to be damaged by being dropped, dragged from under loads or subjected to sudden loads;
- when using jib cranes, make sure any indicators for safe loads are working properly and set correctly for the job and the way the machine is configured;
- use outriggers where necessary;
- when using multi-slugs make sure the sling angle is taken into account;
- have a responsible slinger or banksman and use a recognized signaling system.

Don't...

- use unsuitable equipment, e.g. makeshift, damaged, badly worn chains shortened with knots, kinked or twisted wire ropes, frayed or rotted fiber ropes;
- exceed the safe working load of machinery or accessories like chains, slugs and grabs. Remember that the load in the legs of a sling increases as the angle between the legs increases;
- lift a load if you doubt its weight or the adequacy of the equipment.