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DAILY OPERATOR CHECKLIST FOR OVERHEAD CRANES

REMEMBER: DAILY INSPECTIONS COULD PREVENT ALMOST ALL MECHANICAL FAILURE ACCIDENTS.

OSHA regulations (Section 1910.179) requires overhead crane operators to conduct a daily safety check of their hoists or cranes prior to use at the beginning of each shift during which a crane is used. Visual inspections shall be limited to that which can be made from a catwalk, floor, or other safe observation point.

- No written or signed report is required on a daily basis for this inspection.
- Any deficiency is to be reported to the proper person before you use the hoist or crane.
- A daily check of these items for function, proper operation, wear, and damage is required at the start of each shift prior to the use of the crane.

Safety Is Everyone's Responsibility!

- SAFETY EQUIPMENT: Do you have, and are you using, all the safety equipment that you need for the areas you will be traveling through or working within?
- ARE YOU TRAINED AND AUTHORIZED TO USE THIS EQUIPMENT?
Do Not Operate Any Hoist Or Crane Unless:
 1. You have been **trained** & have read the manufacturers operation & safety manual.
 2. You have been **authorized** to do so by your employer.
- AREA CHECKOUT: BEFORE YOU TOUCH THE CONTROLS YOU MUST:
 1. **Know** where the Crane Disconnect Switch located.
 2. **Look** to see if there are any **WARNING signs** on or near the push button pendant or controls, warning of persons working on the crane or in the crane travel area.
 3. **Look** around the area for any **people** working on the crane or in the runway travel area.
 4. **Are people working in the area**, that the load you are going to pickup will travel? **They must be warned**, and asked to move if the load will travel over their location.
 5. Is the **area** where you will set the load down **large enough** and/or **cleared of obstructions**? Is there **adequate cribbing** material, if required?
 6. Do you have the **proper slings** or other below-the-hook devices required to properly attach and pick up the load?
 7. Do you know the **weight** of the item being lifted? Is the load **plus** all below-the-hook devices less than or equal to the rated capacity of the crane?

• **PRELIMINARY EQUIPMENT CHECKOUT: BEFORE YOU TOUCH THE CONTROLS YOU MUST:**

1. **Look up** at the Hoist, Trolley, Bridge, Runway and Electrification. **Look** for any loose, damaged or broken parts of the system.
2. **Look** to see if the **wire rope** is properly reeved and seated in the drum grooves properly.
3. The **bottom block** should **not be twisted** causing any two lengths of wire rope to touch.
4. Check for items contacting or close to any **open power sources**. Are control enclosures properly closed?
5. Check for **wires pulled** from strain reliefs or bushings.
6. Check **Pushbutton Pendant** or controls for any damage, including cracks, torn boots, or missing legends.
7. Check the **Controls** for the A.N.S.I. required **Warning Tag**.

• **EQUIPMENT CHECKOUT: (POWERED) PROCEED ONLY IF ALL OF THE ABOVE ITEMS HAVE CHECKED OUT SATISFACTORILY.**

1. **FIRST, PUSH THE OFF BUTTON** or Pull the disconnect to the off position. Be positive the power to the controller is disconnected.
2. **Try** all the **pushbuttons** or controls **EXCEPT THE ON BUTTON**, to check for proper operation and button feel. Each button should operate smoothly with no sticking and, when released, return to the off position automatically.
3. Now you can **PUSH** the **ON BUTTON**.
4. If the crane has a button operated warning device, press this button to test it's operation.
5. The next button to be pressed **MUST** be the **UP BUTTON**. If the hoist raises the empty hook, then you may proceed. If the empty hook is lowered when the up button is pushed, **IMMEDIATELY** release the button. The hoist is incorrectly phased and must be correctly phased by a qualified service person before you proceed. If you attempt to use an incorrectly phased hoist, the upper limit switch will not operate, and will allow the hoist to "two block" (causing the hook block to contact the hoist frame) and/or shear the wire rope.
6. It is now time to **TEST** the **UPPER LIMIT SWITCH**. Raise the empty hook. **EXTREME CARE** shall be exercised; the hook block shall be inched into the limits or run in at low speed. When contacting the limit switch the up circuit should shut off automatically, or temporarily reverse the hook, and then shut off. If the switch does not operate properly, the appointed person shall be immediately notified. The hoist limit switch, which controls the upper limit of travel of the load block shall never be used as an operating control.
7. Now **check** all the **other pushbuttons** or controls for proper control, function and direction.

• **ADDITIONAL EQUIPMENT CHECKS: IT IS NOW TIME TO COMPLETE YOUR VISUAL CHECKS.**

1. **HOOKS** are to be check for the following:
 - a. **Wear** anywhere on the hook particularly in the saddle area. (10 percent maximum)
 - b. **Bending, or twisting** is usually found that the tip of the hook or at the point where the shank comes out of the block. If any twist beyond 10° from the plane of the unbent hook or if the throat has been stretched 15% or more the hook must be replaced.
 - c. **Cracks** anywhere on the hook.
 - d. **Safety latches**, in place and functional. Not distorted or out of the throat. Spring functioning.
 - e. **Hook nut** if visible. Tight and locked to hook with through pin or welded.
 - f. Hook should **rotate** freely in the bottom block assembly. No grinding feeling or sound should be observed.
2. **BOTTOM BLOCK ASSEMBLY** is to be checked for the following:
 - a. **Structural Damage**.
 - b. **Capacity markings** if required.

- c. Bottom Block **Sheave(s)** should **rotate freely**, with no grinding feeling or sounds coming from the bearing(s).
 - d. Bottom Block **Sheave(s)** should not have deepened grooves or a wire rope pattern worn into the seat area or have worn flanges. Sheave(s) are to be smooth.
 - e. No **cracks** should be found in any component.
 - f. Bottom block **sheave guard(s)** must be **intact** and unbroken. No part of the sheave guard should be in contact with a wire rope or sheave.
3. **WIRE ROPE:** is to be checked by walking 360° around the lowered hook block and looking for the following conditions:
- a. **Reduction in diameter**, caused by loss of center core support, internal or external corrosion, or wear of outside wires.
 - b. **Broken wires.**
 - c. **Kinking, Crushing, Cutting, Unstranding Or Thermal Damage.**
4. **LOAD CHAIN:** is to be checked by walking 360° around the lowered hook block and looking for the following conditions:
- a. Any link that has **cracks, gouges, nicks, weld splatter, corrosion, or distorted links.**
 - b. **Wear** at contact points. Slacken the chain and rotate links so that the wearing area is visible to inspect for wear at the contact points. If wear is observed or if stretching is suspected, further inspection by a qualified person is required.
 - c. Run the chain up-and-down, listen and feel for **smooth operation** through the chain sprockets and guide. If roughness or jumping are observed, further inspection by a qualified person is required.
5. **MISCELLANEOUS ITEMS TO CHECK:**
- a. Proper operation of Bridge and Trolley **Motor Brakes.**
 - b. Little or no **Hook Drift** when releasing Up or Down push button or control.
 - c. Pushbutton pendant **Strain Relief** is in good condition.
 - d. Proper **Tracking** of Trolley and/or Bridge.
 - e. Good **Housekeeping.** No loose items on crane that could fall, or any excessive oil leaks.
 - f. On cab operated cranes, the availability and condition of a **fire extinguisher.**
 - g. On cab operated cranes, the availability and condition of the **emergency means of egress.**
 - h. Condition of any **Air or Hydraulic Lines.**
 - i. Condition of all **Below-The-Hook Devices** including **Slings.**
6. **ITEMS TO CONSTANTLY OBSERVE DURING CRANE USAGE:**
- a. All functional **operating mechanisms** for maladjustment interfering with proper operation or excessive wear of components.
 - b. Proper **rigging** of the load.
 - c. The operator shall test the **hoist brakes** each time a load approaching the rated load is handled. The brakes shall be tested by raising the load a few inches and applying the brakes.
 - d. Check to see that there is never any less than **two full wraps** of wire rope on the drum. (for each attachment to the drum).

* THIS LIST IS NOT INTENDED TO BE 100% COMPLETE. THIS LIST SHOULD BE MODIFIED FOR EACH HOIST OR CRANE IN YOUR FACILITY IF NECESSARY .



Remember: Accidents Can Be Prevented

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