



## Resources | Solutions

### Pre-Shift Crane and Hoist Check Plan

At the start of each shift, your overhead cranes and hoists should be looked at by an designated person using the inspection guidelines listed below.

While this is not a complete list, it is a reasonable pre-shift check list to ensure that your overhead lifting equipment is ready for use during the shift to come.

This check should be conducted for each crane and hoist in your facility prior to every shift, and then recorded, dated and signed for by the designated person and these records kept for future reference.

- **Directional Motion Check** – It is critical that the motion of the hook travel is in correct relationship with the button being depressed on the controller (hereafter referred to as the push button station). To check this function, depress the up button and watch the direction that the hook travels. If the hook does not go up, stop and advise your supervisor. This is the most critical indicator of whether your crane is functioning correctly or not. The problem can be corrected by reversing any two leads for the lift/lower circuit at the power source. Do not attempt to correct this problem by changing control leads in the push button station, at the contactor or by simply changing the nameplates on the push button station.
- **Push Button Directional Labels** – Make sure all push button directional labels and crane movements are in agreement with and correctly respond to the operator commands.
- **Hook Upper Limit Switch** – Move the hook up toward the hoist and watch it as it travels upward. If the hook stops automatically as it approaches the bottom of the hoist frame, the limit switch is working and is set correctly. If the hook block does not stop within the pre-set distance of the hoist frame, the limit switch is not working or set correctly.
- **Hook Lower Limit Switch** – Lower the hook while watching the travel cycle. The hook must stop before it touches the floor or prior to the last two wraps on drum coming unwound. If either of these happens, the limit switch is not working or set correctly.
- **Wire Rope Check** – While checking the upper and lower limit switches it is also a good opportunity to check the wire rope for broken strands or kinks. Place a leather glove on one hand and allow the rope to travel through a loosely gripped fist. If the rope snags the glove at all, then you have some broken strands and it should be inspected more closely to determine the severity of this condition. Also, visually check the rope as the hook is going up and down looking for any kinks. If there are any, once again, it should be inspected more closely to determine the severity of this condition.
- **Operational Test** – Look to be sure there are no obstructions present or any personnel are in the path of travel and then move the crane or hoist through all travel directions. Also listen closely for sounds that are not typically heard during normal operation.

- If the unit passes all of the checks, it is now ready for work during this shift.
- Remember, if any of these tests fail, the first thing for the operator to do is to advise their supervisor and request corrective action. Using a crane or hoist that does not pass any one of these tests is not safe for the operator or other personnel in the area and can cause damage to the crane, your building, products or other machinery.