



Functional Inspection

Functional inspections shall be conducted at the beginning of each shift, or before the crane is first used during each shift.

Items that shall be inspected include

- Operational controls, hoisting and lowering, trolley travel, bridge travel, limit switches.
- Operational verification of the upper limit device under no-load conditions. The load shall be inched into the limit or run in at a slow speed.
- Deterioration or leakage in lines, tanks, valves, drain pumps, and other parts of air or hydraulic systems.
- Ropes, looking for the following removal criteria:
 - Distortion of the rope, such as kinking, crushing, unstranding, bird-caging, main strand displacement, or core protrusion.
 - Reduction of rope diameter below nominal diameter due to loss of core support, internal or external corrosion, or wear of outside wires.
 - General corrosion
 - Broken or cut strands
 - Apparent heat damage from any heat source
 - Number, distribution, and type of visible broken wires:
 - In running ropes, twelve randomly distributed broken wires in one lay or four broken wires in one strand in one lay.
 - One outer wire broken at the contact point with the core of the rope, which has worked its way out of the rope structure and protrudes or loops from the rope structure.
- Hoist chains, including end connections, for excessive wear, twist, distorted links interfering with proper functions, or stretch beyond manufacturer's recommendations.
- Hooks and latches, looking for the following removal criteria:
 - Excessive throat opening
 - Damages or missing safety latch
 - Wear, deformation, corrosion
- Record the inspection using an inspection tag affixed to the crane/hoist or made closely available to the crane/hoist.

