Overhead Crane and Hoist Inspection Checklist

Per the regulation [WAC 296-24-23519](https://apps.leg.wa.gov/wac/default.aspx?cite=296-24-23519), overhead cranes and hoists must be inspected before use. Inspection procedures for overhead cranes are divided into two general classifications, based on the interval at which inspection should be performed: **frequent** and **periodic**.

This Overhead Cranes/Hoists Inspection Checklistcontains **frequent** inspection requirements, **periodic** inspection requirements, and wire rope/chain inspection information for overhead cranes and hoists.

* Complete a **pre-operation inspection** using the frequent checklist items on the inspection checklist prior to crane/hoist use.
* The operator or other designated person conducts the inspection.
* Cranes/Hoists in regular use must have a documented inspection checklist at least **monthly** using the **frequent inspection.**
  + Cranes/Hoists idle for *1 to 6 months* must have a documented **frequent inspection** before use.
  + Cranes/Hoists idle for *more than 6 months* must have a documented **periodic inspection** before use (refer to instructions below).
* Deficiencies identified during the pre-operation inspection must be addressed before use.
* Inspectors must sign and date the inspection log or checklist to confirm completion.
* Inspectors must keep a record of all frequent and periodic inspections for one year.

**Periodic inspections** must be completed by qualified personnel. Overhead cranes and hoists in regular use must have a periodic inspection at least **annually**. Refer to the [Cranes, Hoists and Rigging Safety webpage](https://www.ehs.washington.edu/workplace/shop-and-maker-space-safety/cranes-hoists-and-rigging-safety) on the EH&S website for more information on periodic inspections and a list of Seattle area crane inspection firms with qualified personnel.

Any overhead cranes/hoists with deficiencies identified during an inspection must be tagged “out of service,” repaired, or corrected before use. All active cranes should have regular preventive maintenance performed in accordance with the manufacturer’s recommendations.

# Overhead Crane and Hoist Inspection Checklist

Type of crane:      \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Crane capacity (tons):      \_\_\_\_\_\_\_\_\_

Location:      \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hoist capacity (tons):      \_\_\_\_\_\_\_\_\_

| **Item** | **Inspection Frequency:**  **\* = required** | | **Part of Crane/Hoist to be Inspected** | **Inspect for:** | **Equipment Condition:** | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Frequent (once per month) | Periodic (more than 6 months) | **OK** | **Faulty** | **N/A** |
| 1 | \* | \* | Controls and operating mechanisms (includes pendant) | Improper adjustments, excessive wear, and unusual noises; ensure all controls function properly and each performs as marked. |  |  |  |
| 2 | \* | \* | Lines, Tanks, Valves, and Other Parts in Air or Hydraulic Systems | Deterioration or leakage |  |  |  |
| 3 | \* | \* | Hooks | Deterioration or cracks; hooks must be thrown away immediately if:  a) Throat opening is more than 15% in excess of normal throat opening or;  b) Hook tip is more than 10° twist from the plane of the unbent hook.  c) safety latch |  |  |  |
| 4 | \* | \* | Chains and End Connections | Excessive wear, twist, stretch or distortion of links beyond manufacturer’s specs |  |  |  |
| 5 | \* | \* | Safety Devices, Belt-Chain Gear Guards | Improperly adjusted, missing, or broken |  |  |  |
| 6 | \* | \* | Outriggers | Locking devices and general condition foundation and cribbing |  |  |  |
| 7 | \* | \* | Fire Extinguisher (readily accessible) | Missing or discharged |  |  |  |
| 8 | \* | \* | Pre-operational test; upper limit switch operating properly | Verify proper operation of the upper limit and lower limit devices under no-load conditions. Listen for unusual sounds when operating. |  |  |  |
| 9 |  | \* | Boom and Crane Structure | Bent or twisted parts broken welds, cracks, dents, deformation, heavy rust |  |  |  |
| 10 |  | \* | Bolts and Rivets | Loose or missing |  |  |  |
| 11 |  | \* | Sheaves and Drums | Excessive wear, cracks |  |  |  |
| 12 |  | \* | Pins, Bearings, Shafts, Rollers, Gears, Locking and Clamping Devices | Excessive wear, distortion, cracks |  |  |  |
| 13 |  | \* | Brake System | Excessive wear or improper operation of brake system parts |  |  |  |
| 14 |  | \* | Indicators (Load, Wind, Boom Angle) | Significant inaccuracy |  |  |  |
| 15 |  | \* | Chain Drives, Sprockets | Excessive wear |  |  |  |
| 16 |  | \* | Electrical Apparatus | Deterioration of wiring, worn or dirty controls, poor connections |  |  |  |

# Wire Rope/Chain Inspection Checklist

| **Item** | **Inspection Frequency:**  **\* = required** | | **Part of Crane/Hoist to be Inspected** | **Inspect for:** | **Equipment Condition:** | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Frequent (once per month) | Periodic (longer than 6 months) | **OK** | **Faulty** | **N/A** |
| 1 | \* | \* | Reduction in diameter | Remove wire rope from service if reduction from nominal diameter is greater than 5%. |  |  |  |
| 2 | \* | \* | Broken wires | 4 broken wires in 1 strand, or 12 broken wires in all strands |  |  |  |
| 3 | \* | \* | Flat spots | On outer wires where wires <2/3 normal thickness |  |  |  |
| 4 | \* | \* | Distortion – Core failure | Severe kinking, crushing bird caging, displaced wires |  |  |  |
| 5 | \* | \* | Chain links Wear/distorted | Gouges, nicks, corrosion, weld spatter |  |  |  |
| 6 | \* | \* | Chain links stretched | Chain length > 1.5 – 2.5 % longer (powered versus manual) than unused |  |  |  |
| 7 | \* | \* | Heat damage | From any cause |  |  |  |
| 8 | \* | \* | Wires at end connections | Corroded or broken wires at end connections |  |  |  |
| 9 | \* | \* | End connections | Corroded, cracked, bent, worn or improperly applied end connections |  |  |  |
| 10 | \* | \* | Wire rope/chain operation | Not noisy; no binding and feeds smoothly; chains are lubricated per original equipment manufacturer. |  |  |  |

Inspector notes:

Note: Any deficiencies should result in taking the crane out of service and the crane should not resume service until the deficiencies are addressed. Keep all records on file for 1 year after inspection date.

# Inspection Log

| **Name of Inspector** | **Initials** | **Date** | **Type of inspection**  **(frequent or periodic)** | **Comments/observations/changes from previous inspection** |
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