

Jib Crane Inspection Checklist

Daily • Monthly • Annual — Three-Tier Inspection System

Daily: every shift | **Monthly:** maintenance staff | **Annual:** qualified person

Daily / Pre-Shift Checklist

Before the first lift. Fail any item → tag out of service. (~10 min)

Structural components

- ☐ Column and arm: no cracks, dents, corrosion, or deformation
- ☐ Welds: no visible cracks, especially at arm-to-column connections
- ☐ Anchor bolts: present, tight, safety washers intact
- ☐ Rotation bearing: no excessive play or grinding noise

Wire rope / chain

- ☐ No broken wires (count against retirement criteria)
- ☐ No kinks, crushing, flattening, or bird-caging
- ☐ Rope properly seated in sheaves; lubrication adequate
- ☐ Chain: no cracked or deformed links, no stretching

Hook

- ☐ No cracks, bending, or twist
- ☐ Throat opening within manufacturer's limit
- ☐ Safety latch present and closing properly
- ☐ Swivel rotates freely

Brakes, limits, and controls

- ☐ Hoist brake holds the load at any point in travel
- ☐ Upper and lower limit switches stop motion correctly
- ☐ Emergency stop button functions
- ☐ Pendant/remote buttons responsive; e-stop not bypassed
- ☐ Power cable no cuts or exposed conductors; grounding intact

No-load function test (5 minutes)

- ☐ Raise and lower through full travel—motion smooth, no slipping
- ☐ Rotate arm through full range—no binding, no unusual noise
- ☐ Brake test: stop at mid-travel, hook must not drift

Work area

- ☐ Swing radius clear of people, stock, and obstructions
- ☐ Load rating label legible

Monthly Checklist

By maintenance staff. Document in the equipment log.

Fasteners and structure

- ☐ Re-torque anchor bolts to specification; check vibration looseness
- ☐ Inspect all structural bolts for tightness and condition
- ☐ Measure column verticality; investigate any visible lean

Mechanical

- ☐ Lubricate rotation bearing, hoist gears, wire rope per schedule
- ☐ Check brake pad/shoe wear; adjust or replace before limit
- ☐ Inspect trolley wheels/bogies for wear and alignment
- ☐ Check limit switches for damage and correct adjustment

Electrical

- ☐ Inspect pendant station, cable, and plug for damage
- ☐ Tighten control panel connections; check overheating signs
- ☐ Test ground continuity

Documentation

- ☐ Review daily check records; follow up on recurring defects
- ☐ Update log with date, findings, and actions

Periodic / Annual Inspection (Qualified Person)

12 months max. Beyond visual: NDT, measurement, and load testing.

- Structural examination:** close visual + magnetic-particle or dye-penetrant testing of critical welds; arm deflection under known load vs. manufacturer baseline
- Rotation bearing:** internal inspection or play measurement
- Hoist unit:** brake torque test, gearbox condition, rope retirement assessment
- Electrical:** insulation resistance testing, protective device verification
- Load test:** 110% rated capacity (dynamic) / 125% (static), per standards; mandatory after any structural repair or reinstallation
- Report:** written record of findings, deficiencies, corrective actions, next due date

Inspect After Any Exceptional Event

- Suspected or confirmed overload | Collision or impact | Severe weather
- Return to service after months of storage | Unusual noise, vibration, or smell

Retire: wire rope >6 broken wires per lay (or any kink/crushing) • hook throat >15% opening or any crack • chain gouged >10% of link diameter • any structural crack = out of service until evaluated.
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