

Crane Lifting and Rigging JHA

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Learning and planning resource. Adapt with the people doing the work, verify actual controls and follow required authorization. This document supplies no completed field inspections, signatures or work approval.

Work and worksite

Fictional example: a mobile crane lifts one identified prefabricated form panel from a prepared laydown rack to an engineered receiving position. The panel will be stabilized according to its erection design before rigging is released. The route remains inside a controlled construction area. The example excludes personnel lifting, multiple-crane lifts, steel erection, and lifts near unresolved power-line exposures. This JHA supports a site-specific lift plan; it does not provide one or calculate crane or rigging capacity.

- Establish the panel identity, weight, center of gravity, lifting points, sail area, and manufacturer handling information; do not infer these from dimensions alone.
- The lift plan must identify the crane configuration, radii throughout the path, load-chart deductions, rigging arrangement, ground support, weather limits, and receiving arrangement.
- Assign an appropriately trained, certified/licensed and employer-evaluated operator as applicable, qualified rigging personnel, qualified signal personnel when required, and the person directing the lift.
- Identify buried structures, ground conditions, public/worker interfaces, power lines, emergency actions, and clear authority for anyone to call stop.

Actual project records needed: Location, crew and responsible people; equipment models and instructions; permits/releases; emergency arrangements; actual checks and approvals.

Task | Hazard | Control | Verification

Review the lift and crew roles

Hazard: Incorrect load information or unclear responsibilities cause an overload, unsuitable rigging, or conflicting movement instructions.

Control: The responsible lift planner establishes the lift method and capacity checks using actual equipment and load data. Brief the operator, riggers, signal person, receiving crew, and affected trades on roles, signals, stop criteria, and changes.

Verification: Verify the current lift plan, load documentation, equipment configuration, role qualifications, and each person's understanding.

Reasoning: A signed JHA cannot compensate for an unknown panel weight or an unverified crane configuration.

Set up the crane and control the area

Hazard: An outrigger punches through inadequate support; the crane or load enters a power-line zone or strikes a worker.

Control: Establish adequate ground/support conditions and use the planned matting and outrigger arrangement. Identify and resolve power-line hazards under the applicable provisions. Barricade swing/crush areas and control the load route and landing zone.

Verification: The designated personnel verify support conditions, underground information, setup dimensions, and effective exclusion before lifting.

Reasoning: Ground condition and load-path decisions must precede lifting because their failure can affect the entire crane.

Inspect crane and select rigging

Hazard: Defective equipment or rigging fails; incompatible hardware or unsuitable sling angles overload individual components.

Control: Complete required crane inspections. A qualified rigger selects the arrangement for the panel, lifting points, angles, capacities, and edge protection. Inspect and remove defective or unidentifiable rigging; do not improvise lifting points.

Verification: Check inspection status and actual rigging identification, condition, connections, and compatibility against the planned arrangement.

Reasoning: A sling's straight-pull rating does not establish capacity in every hitch or angle.

Connect and take controlled tension

Hazard: The panel shifts from its rack, loose items fall, or hands are trapped as rigging tightens.

Control: Secure loose items, connect from stable access, and keep hands and bodies out of pinch and fall zones. Take up tension only on the agreed signal. Check rigging seating and load behavior before continuing; lower and reassess unexpected movement.

Verification: The rigger and operator verify connections, freedom from snagging, panel balance, and that people are clear.

Reasoning: Initial tension is a verification stage, not a reason to continue with an unstable load.

Lift and transfer along the planned route

Hazard: The suspended panel strikes a structure or person, rotates in wind, or moves after communication is lost.

Control: Follow the planned path and operating limits. Use the designated signal arrangement and stop for lost communication or visibility. Restrict fall-zone access as required; use planned tag-line or equivalent control when necessary without creating entanglement exposure.

Verification: Monitor clearance, wind and panel behavior, exclusion boundaries, and confirmed communication throughout the movement.

Reasoning: Load control must protect the handlers as well as prevent unwanted rotation.

Land, stabilize, and release

Hazard: The panel falls after unhooking or crushes a receiving worker against the structure.

Control: Only necessary receiving personnel enter the controlled landing operation. Use positioning tools and keep bodies out of crush points. Install the designed supports, braces, and connections before releasing rigging, using the approved access method.

Verification: The responsible receiving person verifies the specified stabilization and communicates readiness before controlled unloading and detachment.

Reasoning: The crane can hide an unstable receiving condition until the lifting connection is released.

Pause and reassess

- Pause for changed radius, load identity, rigging, weather, support conditions, route, or receiving arrangement.
- Stop for loss of communication, exclusion-zone entry, uncontrolled rotation, equipment concerns, or unresolved power-line hazards.

Correct the condition, revise the analysis, communicate the change and obtain required authorization before restarting.

Improve the control

Needs improvement: Rigging: use certified gear.

More useful: Verify identification, condition, capacity for the actual hitch/angle, compatible hardware, and the designed lifting points.

Needs improvement: Release rigging when panel is set.

More useful: Verify the specified braces, anchors, and connections are installed before authorizing rigging release.

Decisions that change the analysis

The panel drawing and delivery label disagree. What now?

Do not lift until the responsible planner resolves identity and weight and confirms the lifting arrangement.

The receiving brace anchor cannot be installed. Can the crane release?

No release under this planned method. Keep the condition controlled and obtain a revised stabilization solution before proceeding.

References and adaptation

OSHA 1926.1402: Ground conditions

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1402>

OSHA 1926.1408: Power-line safety

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1408>

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OSHA 1926.1412: Crane inspections

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1412>

OSHA 1926.1417: Operation

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1417>

OSHA 1926.1425: Keeping clear of the load

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1425>

OSHA 1926.1427: Operator training, certification, and evaluation

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1427>

OSHA 1926.251: Rigging equipment

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.251>

OSHA 1926.1428: Signal-person qualifications

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1428>

This original walkthrough was informed by review of uploaded examples, then rewritten for the stated fictional scenario using current primary references. It does not reproduce a source document or its approval record.

Walkthrough and draft builder: <https://www.toddjeromejenkins.com/jha-jsa-examples/crane-lifting-rigging-jha>