

Concrete Boom Pump Setup JHA

Worked instructional example

Work and worksite

A specialist pump operator and site crew will position a truck-mounted concrete boom pump on a released ground-level setup pad for a building slab pour. This analysis ends at setup handover before concrete delivery. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- Ground support, outrigger arrangement and operating envelope must be established for the actual pump.
- The pad is separated from pedestrians and delivery routes, with identified buried structures and overhead electrical lines.
- Concrete placement, end-hose handling, line blockage, cleanout and road travel require separate analyses.

Questions before work

- Who verifies ground capacity and buried structures beneath each support?
- Which outrigger arrangement and boom envelope are permitted by this model?
- What electrical clearances and utility coordination apply to this location?

Task Hazard Control

1 Release the setup pad

Hazard: A support can punch through weak ground or a hidden vault, overturning the pump.

Control: Site lead provides ground and underground-structure information; operator checks the required support area against pump loads and instructions. Obtain competent technical review where capacity is unresolved; do not guess from surface appearance.

Verification: Site lead and operator record the support basis before the truck enters.

Reasoning: Visible level ground does not establish bearing capacity.

2 Separate truck movement

Hazard: Backing or positioning can strike a worker or trap a guide.

Control: Establish an exclusive positioning zone and agreed operator-guide signals. Guides stay visible and outside wheel and crush paths; stop if communication is lost.

Verification: Movement lead checks pedestrian and ready-mix routes before positioning.

Reasoning: The setup movement must remain separate from pour traffic.

3 Deploy supports

Hazard: Outrigger movement can crush hands; an unsuitable pad or partial extension can destabilize the unit.

Control: Operator deploys the model-specific outrigger configuration on selected supports. Keep workers out of moving support paths. Partial extension is allowed only when the actual system explicitly permits and controls it.

Verification: Operator compares deployed supports and level with the model instructions.

Reasoning: A familiar truck silhouette does not prove the configuration is permitted.

Complete the work and hand over

4 Establish the boom envelope

Hazard: The boom can contact energized lines, structures or occupied work.

Control: Identify line voltage and the applicable clearance method with the responsible parties. Operator defines a restricted boom envelope and designated observation where needed; do not transfer a crane clearance rule to a pump without checking applicability.

Verification: Lead documents the electrical boundary and checks the full proposed boom movement.

Reasoning: Pump-specific electrical planning must precede unfolding.

5 Inspect and function check

Hazard: Defective controls, hydraulics or pipeline restraints can allow unintended movement or separation.

Control: Qualified operator completes the pump inspection and safe function checks under its manual. Check emergency controls and the planned supported delivery-line connections; take defective equipment out of service.

Verification: Operator records defects and confirms the test area remains clear.

Reasoning: A completed support setup does not verify the pumping system.

6 Hand over for the pour

Hazard: An arriving truck or placing crew can enter an uncoordinated pump zone.

Control: Brief delivery and placing leads on exclusion zones, communication, boom restrictions and setup monitoring. Require the separate placement and hose analysis before concrete starts.

Verification: Receiving leads confirm responsibilities and stop signals at handover.

Reasoning: This setup analysis intentionally ends before concrete discharge.

Pause and reassess

- Support settlement, ground cracking or loss of level.
- Electrical boundary, boom envelope or delivery route changes.
- A defect, unauthorized support configuration or communication failure.

Improve the controls

Needs improvement: Work carefully and wear PPE.

More useful: Operator deploys the model-specific outrigger configuration on selected supports. Keep workers out of moving support paths. Partial extension is allowed only when the actual system explicitly permits and controls it.

Needs improvement: Check that everything is ready.

More useful: Site lead provides ground and underground-structure information; operator checks the required support area against pump loads and instructions. Obtain competent technical review where capacity is unresolved; do not guess from surface appearance.

Decisions that change the analysis

Does the published slab pour cover pump setup?

Its concrete distribution scenario assumes a released pump arrangement. This example addresses ground support, outriggers and boom clearance before that handover; it does not repeat end-hose operation.

What must the crew record for actual use?

Identify the actual equipment and work boundaries, responsible people, applicable criteria, inspection findings and open actions. Resolve changes with affected crews and obtain required project authorization before work.

Training needs

- Actual pump model operation, support deployment and emergency controls for the assigned operator.
- Site team instruction on ground-support evidence, electrical boundaries and truck communication.

Confirm applicable qualifications and actual training evidence for the people assigned. Related toolbox talks support discussion; they do not establish competence.

References and adaptation

OSHA Concrete boom pump interpretation

<https://www.osha.gov/laws-regs/standardinterpretations/2013-05-02-0>

OSHA 1926.702 Concrete equipment and tools

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.702>

OSHA 1926.21 Safety training and education

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.21>

References reviewed October 9, 2026. Use actual equipment and product instructions, project design and site requirements. This instructional example supplies no actual inspection results, signatures or work approval.