

EAST COAST RAILWAY

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Sub: Safety Instructions for Working near JCB and Other Machines.

In construction activities and other Civil Engineering works, JCB and other heavy machinery are being used for greater benefits like cost effective & speed in execution etc. However, heavy machinery can also pose significant risks, including accidents, injuries and fatalities. Safety instructions can help the operators & workers to understand potential hazards and follow proper protocols to avoid them.

1) Pre-Operation Safety Check:

- a. Ensure all operators are properly trained and certified to operate JCBs and heavy machinery.
- b. Inspect the machine thoroughly before use, checking for any mechanical faults, fluid leaks, or missing parts.
- c. Verify that safety guards, mirrors, and emergency shutdown systems are in place and functioning.
- d. The truck or crane operator contact numbers and site supervisors/in-charge contact numbers should be shared with concerned authority, so as to contact immediately in case of any unusual incident.

2) Designated Safety Zones:

- a. Clearly mark and demarcate safe zones around machinery with visible signs and barriers.
- b. Workmen should remain outside the marked zones unless specifically authorized or during supervised operations.

3) Personal Protective Equipment (PPE):

- a. Wear appropriate PPE, including hard hats, steel-toed boots, high visibility clothing, and gloves.
- b. Ensure ear protection is used when working near loud machinery.

4) Communication and Signaling:

- a. Establish clear communication methods (walkie-talkies, hand signals) between operators and ground workers.
- b. Use signaling devices or spotters when reversing or maneuvering equipment in confined areas.



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- 5) No Unauthorized Access:
 - a. Only authorized personnel should operate or be near operating machinery.
 - b. Never stand under or near raised or moving parts of JCBs and similar machines.
- 6) Machine Movement Awareness:
 - a. Be aware of the machine's blind spots and movement range, especially when moving or rotating the machines.
 - b. Ensure all workers are accounted for before the machine starts moving.
- 7) Stability and Ground Conditions:
 - a. Check the ground conditions before operating heavy machinery. Soft or unstable ground can increase the risk of tripping.
- 8) Emergency Procedures:
 - a. Familiarize workers with emergency evacuations routes and procedures in case of accidents.
 - b. Know how to quickly shut down machinery in the event of an emergency.
- 9) Signal Operators for Assistance:
 - a. Workers should never approach or attempt to communicate with the operators while the machine is in motion unless it is absolutely necessary, and only using proper hand signals or communication devices.
- 10) Machine Shutdown Procedure:
 - a. Always ensure the machinery is turned and all moving parts have stopped before performing maintenance or repairs.
 - b. Lock out/tag out procedures should be followed when servicing or cleaning machines.
- 11) Clear Visibility and Lighting:
 - a. Ensure the working area is well-lit, especially in low-visibility conditions, reduce the risk of accidents.
 - b. Keep the operator's cabin clean JCBs and other heavy machinery.

By adhering to these safety instructions, operators and workers can reduce the risk of accidents and ensure a safe working environment around JCBs and other heavy machinery.

Divisions and Construction Units are advised to ensure implementations of above instructions in field by concerned Supervisors.

2024/1/25

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1. CAO/C/BBS, VSKP & RSP/BBS
2. All HODs. of Engg dept.
3. Sr.DEN/Co-Ord/KUR, SBP, & WAT for information and implementation.