

# CIC Safety Message No. 04/25



## SAFE OPERATION OF TRUCK-MOUNTED CRANE

Truck-mounted cranes are widely used for lifting operations and materials delivery in construction sites. Unsafe operation of truck-mounted cranes could result in serious accidents and pose a danger to general public in vicinity. The Construction Industry Council (CIC) would like to deliver this safety message for your attention. It would be appreciated if you could distribute the message below to your fellow members, relevant personnel or other industry stakeholders where appropriate. Thank you very much.

#### **Common Accidents**

- 1. Failure to set up the outriggers of truck-mounted crane properly.
- 2. Failure to check the ground condition prior to the commencement of work to ensure there is sufficient load bearing capacity.
- 3. The weight of the loads exceeds the maximum safe working load (SWL) of the truck-mounted crane.
- 4. Failure to inspect, repair and maintain the truck-mounted cranes properly.
- 5. Failure to conduct dynamic risk assessments and take appropriate safety measures in response to changes in the environment and procedures.

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### **Critical Control Measures**

- 1. Prior to the commencement of works, construction team should conduct risk assessments to identify the risks on toppling of a truck-mounted crane and develop safe working procedures with due consideration to identify lifting zone, fatal zone and proper working positions of workers, so as to eliminate or properly control the risks.
- 2. A truck-mounted crane shall be operated on a firm and level ground that can adequately support the weight of the crane and loads.
- 3. Proper setup of outriggers should be checked before lifting operation.
- 4. Appoint a person with sufficient experience and qualifications to strictly monitor the lifting operation and ensure that it is not overloaded.



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- 5. Fence off the lifting zone and fatal zone properly with barricades and prominent notices to ensure no unauthorised entry into the zones.
- 6. A truck-mounted crane with its associated critical parts (e.g. jib, outriggers, hydraulic cylinders and automatic safe load indicators) should be regularly inspected, tested, and properly maintained in accordance with the manufacturer's instructions in order to ensure it is in safe working condition at all times.
- 7. Use appropriate Smart Site Safety System (4S) to strengthen safety management based on the actual site situation, for example, install Dangerous Situation Alert System. If a worker is encroaching the fatal zone, siren and signal light from the system will be activated, thus securing workers' safety.
- 8. Provide all workers concerned with the necessary safety information, instructions and training, and ensure that they are familiar with the safe work procedures of the lifting operation.









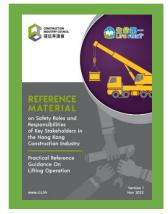
## What if all stakeholders can act together and take one step further to fulfill their roles and responsibilities, can similar accident be avoided?

- In the design stage, designers and engineers should consider the working environment of the operation zone and the risks nearby, and select appropriate construction methods, lifting appliances and lifting gears, in order to reduce risks from the source.
- During the construction stage, construction team should implement an effective management system and appoint competent lifting supervisors to oversee the lifting operation in accordance with the lifting plan.
- Work team shall conduct dynamic risk assessments for the rapidly changing activities, continuously identify the hazards, assess the risks, and take actions to eliminate or reduce risks during construction.
- Workers can identify any changes in the construction process, report it to their supervisors and take action against it immediately.

## Reference information for sharing



Standard and Guide on Lifting Operation



Reference Material on Safety Roles and Responsibilities of Key Stakeholders in the Hong Kong Construction Industry (Practical Reference Guidance On Lifting Operation)



Reference Material – Guide to Smart Safety-Related Technologies for Use in Construction Works



Lifting Safety Handbook



