



All Owners of Lorry Cranes
 Authorised Examiners (Lifting Equipment)
 Other Interested Parties

Dear Sir,

REMINDER: SAFE WORK PROCEDURES FOR OPERATING LORRY CRANES ON PUBLIC ROADS

On 16 July 2010, a lorry crane used for tree pruning exercise along a road was involved in a serious accident when the retracting boom hit a public bus. One passenger died and several others injured. It is important to note that strict adherence to safe work procedures for lorry crane operations are critical to ensure safety of workers as well as other road users. The purpose of this circular is to remind employers on the common workplace hazards involved in such works and their preventive measures.

Competency of Operator of Lorry Crane

2. **It is the employer's duty to ensure that only trained and competent personnel are allowed to operate the lorry cranes.** The operator must conduct an operational check on the crane and its lifting gears daily before use. The operator shall also ensure that the lorry crane is properly maintained and inspected at regular intervals to ensure that it continues to be in safe working condition. The employer is also required to ensure that the operator is familiar with the risks associated with the operation of the lorry crane and the measures taken to reduce the risks. Appended below are some examples of the risks encountered and the measures that must be implemented.

A) Risk due to Traffic Movement

3. Ongoing traffic movement around the work area can pose a danger to the workers working along the roadsides. Other vehicles may knock onto the workers, or may collide with the lorry crane parked along the roads. To ensure the safety of workers and other road users, proper traffic management is therefore critical. While working along the roadsides, contractors must follow the **Land Transport Authority (LTA) - Code of Practice for Traffic Control at Work Zone**. Control measures stipulated in the LTA's Code of Practice include cordoning of work area, re-directing of traffic flow, installation of truck mounted attenuator (TMA), placement of warning lights and signage. In addition, workers deployed to work along the roadsides are required, among other things, to wear luminous vests to enhance their visibility to other road users.

B) Risk involved in the Operation of Lorry Cranes

4. Lorry Cranes are generally used for loading and unloading as well as for lifting of heavy objects or debris at the work area. In the course of the crane operation, besides the moving traffic hazard, the workers also face other hazards such as being crushed by collapsed crane and being hit by falling or swinging loads. Cranes and their lifting gears shall be inspected by an Authorised Examiner once every 12 months to ensure that they can be operated safely. Valid inspection certificates for the cranes and lifting gears must be made available prior to work commencement.

5. In the safe operation of the lorry cranes, particular attention shall be given to ensure that the lorry crane is parked on a firm and stable ground. The outriggers of the lorry crane shall also be fully extended to ensure the stability of the crane. The lifting zone shall also be clearly demarcated with warning signs so that no one (except the

authorised personnel) shall be allowed to enter the barricaded area or to work within close proximity of the lorry crane. The boom of crane shall also be retracted fully to its home position before the lorry crane can be driven away.

C) Risk due to Working at Heights

6. In carrying out certain works such as tree pruning, workers are often required to work at heights (such as working from a man-cage attached to the lorry crane) to cut or trim the branches. As such, they are susceptible to falling from heights. For safe conduct of work, measures such as the use of safety harness with fall arrestor must be provided to the workers. Also, tree branches when cut, may land on the workers below. Hence, proper work procedures and co-ordination among the workers stationed on top of the man-cage and those deployed on the ground are essential.

D) Risk due to Contact with Overhead Cables/Structures

7. In the operation of lorry cranes, part of the crane may come into contact with overhead cables or other structures (e.g. building façade, street lights). Workers carrying out work activities using these cranes can be exposed to these hazards (e.g. electrical hazards involving overhead cables). Hence, adequate clearance between the lorry crane and the overhead cables/structures must be maintained at all times.

Risk Assessment

8. Under the Workplace Safety and Health (Risk Management) Regulations, Risk Assessments shall be conducted to address the safety and health risks posed to any person who may be affected by the activities in the workplace. In particular, employers have a duty to provide an effective management and control system for the use and operation of lorry cranes, including the need to develop and implement a safe work procedure (SWP) for the works. More information on Risk Assessment can be found at the Workplace Safety and Health Council (WSHC) website at <https://www.wshc.sg/>

9. Further information on safety measures pertaining to operation of lorry cranes for landscaping works are given in the **WSH Guidelines for Landscape and Horticulture Work**. This Guideline was developed jointly by the Workplace Safety and Health Council (WSHC) and the Centre for Urban Greenery and Ecology (CUGE), in collaboration with MOM. The guideline can be downloaded at the WSHC's website at <https://www.wshc.sg/>. All owners of lorry cranes are to disseminate the information herein to their respective users or hirers of cranes and their contractors.

10. The above procedures are for your immediate compliance.

Yours faithfully



MR. MOHD ISMADI
for Commissioner for Workplace Safety and Health

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