

22  
April  
2024

# WSH ALERT

## SERIOUS ACCIDENT

### Crane toppled onto van

On 9 April 2024, a mobile crane was being operated up a low bed trailer for transportation out of a worksite when it toppled to its side and onto the adjacent public road. The boom of the crane struck a van on the road. Fortunately, the driver of the van, its only occupant, managed to escape in time without serious injuries.

The Ministry of Manpower is investigating the accident and is also engaging stakeholders with similar operations to ensure they are conducted safely.



The accident scene showing the toppled mobile crane on its side.

Loading/unloading and transportation of heavy equipment or machinery is a challenging and high-risk operation. The WSH Council would like to remind companies to plan for and conduct a WSH risk assessment before carrying out such operations.

### What companies should do

Companies should assess and ensure that their WSH management system covers the following measures:

- **Method Statement:** Develop a method statement for the loading/unloading operation. It should account for physical site constraints, the type of equipment or machinery being transported, the method of loading/unloading at the site, and the risk controls necessary to mitigate toppling or failure during loading/unloading.
- **Safe work location:** Designate a work area with ground condition suitable for loading/unloading (e.g. stable, flat, and level ground) with sufficient space for manoeuvring/lining up to the trailer. The selected work area should be free of ground and overhead obstacles and, ideally, away from pedestrian and vehicular traffic.
- **Safe loading procedure:** Before loading the equipment or machinery:
  - Ensure it is properly stowed for loading, e.g. extendable crane components such as the crane boom and its outriggers must be retracted if recommended in the operation manual.
  - Check that the trailer ramp is wide enough.
  - Verify the angle of the ramp is within the equipment or machinery manufacturer’s recommendation.
  - Confirm the equipment or machinery wheels or tracks and the trailer’s ramp are as clean as possible and ideally free of substances (e.g. mud, grease) that can cause slippage
  - Apply parking brakes and wheel chocks on the front and rear wheels of the trailer to prevent unwanted movement during the loading operation.

The equipment or machinery should approach the trailer straight on and slowly move up the ramp whilst ensuring alignment to the ramp at all times. Once on the trailer, apply the parking brakes, secure the equipment or machinery onto the trailer bed, and tuck in all protrusions and securely lash them to prevent movement during transit.

- **Cordon off the collapse zone:** Identify, mark out and temporarily cordon off the collapse zone, if possible, for the duration of the loading operation. The radius of the collapse zone depends on the maximum dimensions of the equipment or machinery and its travel path. Ensure no unauthorised persons are in the collapse zone before carrying out the loading process.

If the loading/unloading activity is being carried out next to a public road, a partial or full road closure may be necessary to effect the collapse zone. Companies are advised to obtain the relevant permits and set up a traffic control plan before performing a road closure. Companies may also consider carrying out loading/unloading activities during off peak hours of the day when traffic is usually lighter.

- **Operator competency:** Deploy only competent operators with the necessary training and experience for the task. For mobile crane operators, verify that the assigned operator has/is:
  - Passed the relevant course conducted by an accredited training provider;
  - Registered with the Ministry of Manpower;
  - Attended the Workshop to Enhance the Safety of Crane Operators (WESCO);
  - Received crane model-specific training including how to safely load/unload the crane; and
  - Medically fit to operate the mobile crane.

For more information, refer to the WSH (Operation of Cranes) Regulations 2011, SS 536 2023: Code of Practice for the Safe Use of Mobile Cranes, SS 663 2020: Code of Practice for Safe Loading on Vehicles, the WSH Council’s [WSH Guidelines on Safe Loading and Unloading on Vehicles](#), the Land Transport Authority’s [Code of Practice for Traffic Control at Work Zone](#), and the Singapore Contractor Association Limited’s [Construction Site Traffic Management Guide](#).

Under the WSH Act, first-time corporate offenders may be sentenced to the maximum fine of \$500,000 whilst individuals can either be sentenced to the maximum fine of \$200,000 and/or an imprisonment not exceeding 2 years. Read more on the [WSH Act penalties](#).

Information on the accident is based on preliminary investigations by the Ministry of Manpower as at 18 April 2024. This may be subject to change as investigations are still on-going. Please also note that the recommendations provided here are not exhaustive and they are meant to enhance workplace safety and health so that a recurrence may be prevented. The information and recommendations provided are not to be construed as implying liability on any party nor should it be taken to encapsulate all the responsibilities and obligations under the law.

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