

# WSHAlert

22 February 2021, Ref: 2021092

## Accident Advisory: Worker caught in-between boom lift and roof structure

Ref: [2021075](#) WSH Alert Accident Notification dated 25 November 2020

On 23 November 2020, a worker was raising the work platform of a boom lift when he was caught between the guardrail of the boom lift and a roofing structural member. The injured worker was subsequently extricated and pronounced dead at the scene by attending paramedics.



Figure 1: Overview of the accident scene.

## Recommendations

Persons in control of or carrying out similar work activities requiring the use of a mobile elevated work platform (MEWP) such as a boom lift are advised to consider the following control measures to prevent a similar accident from happening:

### Equipment examination

- As boom lifts are statutory lifting equipment used to lift personnel as defined under the WSH Act, ensure that they are registered with the Ministry of Manpower (MOM) and they are not used unless an Authorised Examiner (AE) had tested, examined and issued a valid certificate of test and examination, specifying its safe working load. The thorough examination and testing by an Authorised Examiner (AE) must be done at least once every six months.

### Competent operator

- Ensure boom lift operators assigned are competent and equipped with the relevant certifications such as Workforce Skills Qualifications (WSQ) Operate Boom Lift course and WSQ Perform Work At Height course;
- Check that operators are familiar with the specific model of the boom lift and its controls, functions, safety features and emergency lowering procedures; and
- Never allow an untrained person to operate or have access to the boom lift controls.

### Pre-operation checks

- Carry out daily pre-use boom lift inspection including functional checks; and
- Walk through the planned boom lift travel route to identify on-site hazards (e.g.,

uneven ground, overhead obstruction, pinch points) and implement additional risk controls or take additional precautions as necessary.

### **Safe work position**

- Advise workers not to lean over the guard rails while the platform is being raised as this can lead to worker entrapment if there is an overhead obstruction; and
- Ensure workers are securely anchored to the boom lift with travel restraint system.

### **Engineering controls**

- Consider installing an overhead obstacle proximity warning system to alert the boom lift operator of a dangerous situation; and
- Consider installing a suitable secondary guarding device (e.g., physical cage, side protection bars, pressure sensing bar) to reduce the risk of worker entrapment/crush injury while working on the boom lift. See guide on secondary guarding devices for MEWPs under Further Information.

### **Safe work practice**

- Remind operators to exercise greater caution and slow down the ascent of the work platform when approaching an overhead obstruction; and
- Use a ground guide (banksman) to guide boom lift movement when in confined areas and areas where there are obstacles/obstructions.

### **Hazard communication and work supervision**

- Brief workers during daily toolbox meetings and/or during site walkabout to ensure that workers are aware of on-site hazards and the risk controls that are in place; and
- Provide on-site supervision to ensure risk awareness and adherence to safe work procedures (SWP).

## **Risk Assessment**

Conduct a thorough Risk Assessment for all work activities to manage any foreseeable risk that may arise during MEWP operation. The Risk Assessment should look into the following areas, but not be limited to:

- Incorporating the need to scan the work environment for potential obstructions into the SWP;
- Permit-To-Work (PTW) system for hazardous work at heights;
- Installation of a MEWP secondary guarding device; and
- Emergency rescue procedures and regular drills

## **Further Information**

1. Workplace Safety and Health Act
2. Workplace Safety and Health (Risk Management) Regulations
3. Workplace Safety and Health (General Provisions) Regulations
4. Workplace Safety and Health (Construction) Regulations 2007
5. Workplace Safety and Health (Work at Heights) Regulations 2013
6. Ministry of Manpower Inspection Requirements for Statutory Lifting Equipment
7. MOM Circular on Safe Use of Mobile Elevated Working Platform
8. MOM Circular on EXAMINATION AND TESTING REQUIREMENTS FOR STATUTORY LIFTING EQUIPMENT
9. Code of Practice on Workplace Safety and Health Risk Management
10. Singapore Standard SS 616: 2016 Code of Practice for Safe Use of Mobile Elevating Work Platforms
11. UK HSE Information Sheet on The Selection and Management of Mobile Elevating Work Platform

12. UK Strategic Forum for Construction Plant Safety Group's Best Practice Guidance for MEWPs: Avoiding Trapping / Crushing Injuries to People in the Platform (Parts 1 & 2)
13. UK International Powered Access Federation's (IPAF's) Guidance on Secondary Guarding Devices for MEWPs

Information on the accident is based on preliminary investigations by the Ministry of Manpower as at 11 Dec 2020. This may be subject to change as investigations are still on-going. Please 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 any liability on any party nor should it be taken to encapsulate all the responsibilities and obligations under the law.

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