

Accident Advisory: Worker caught between lorry and forklift

Ref: [2021038](#) WSH Alert Accident Notification dated 1 June 2020

On 28 May 2020, a worker was within his forklift, attempting to open the door of a lorry that was beside his forklift, when the forklift suddenly reversed, trapping the worker between the door of the lorry and the chassis of the forklift. The injured worker was conveyed to the hospital where he eventually succumbed to his injuries.



Figure 1: Overview of the accident scene.

Recommendations

Persons such as employers and principals in control of similar workplaces with forklift operations are advised to consider the following risk control measures to prevent similar accidents:

Forklift pre-operation check

- Prior to operating a forklift and as part of the safe work procedure, the forklift operator should carry out a pre-operation check/inspection to ensure that the forklift to be used is in good working condition. Refer to the WSH Guidelines on Safe Operation of Forklift Trucks for a sample of the pre-operational checklist.
- Advise forklift operators to immediately report to his/her employer, manager, supervisor or WSH personnel should any defect or problem (e.g. with the gears,

steering mechanism or brakes) be detected during a forklift pre-operation check. The forklift should not be operated until the defect and/or problem detected has been rectified.

Competent forklift operator

- Only trained, competent and authorised workers should be allowed to operate a forklift.
- Check that all authorised forklift operators have passed the "Singapore Workforce Skills Qualification Operate Forklift Course" conducted by a training provider accredited by SkillsFuture Singapore and obtained a Statement of Attainment.
- Ensure that forklift operators attend refresher training every 3 years. Additional in-house training with support from the forklift's manufacturer or supplier is highly recommended.

Forklift servicing and maintenance

- Ensure forklifts are serviced and maintained regularly by competent personnel. The servicing and maintenance intervals should be in accordance with manufacturer recommendations and statutory requirements.

Worker communication

- Conduct toolbox meetings to brief forklift operators of possible on-site hazards and how they can protect themselves through safe work procedures and other risk controls that are in place.
- The toolbox meeting should cover the following (non-exhaustive):
 - foreseeable hazards related to working in close proximity to other vehicles;
 - safe working position for the task; and
 - safe work practices including use of seat belt when seated in the forklift, and the importance of applying the parking brake and switching off the engine before getting off the operator seat.

Work supervision

- Deploy an on-site supervisor to monitor and supervise forklift operations to ensure that they are carried out safely.
- Consider implementing a Behavioural Observation and Intervention programme to encourage safe work practices by engaging fellow workers to look out for one another.

Use presence detection technology

- Explore the use of seat occupancy detection technology to detect the use of seat belt and the weight of the operator on the seat. The forklift may be programmed to allow operation only if the operator is seated with seat belt fastened, and to automatically cut off the engine once the operator gets off the seat.

Risk Assessment

Conduct a thorough Risk Assessment (RA) for all work activities to manage any foreseeable risk that may arise when operating a forklift. The RA should cover, but not limited to, the following areas:

- Possibility of accidental forklift movement and the measures in place to prevent accidental movement;
- Possibility of operator entrapment (i) should the forklift overturn, or (ii) when working next to a stationary object or another vehicle; and
- Safe work procedure for getting on and off the forklift operator seat.

Further Information

1. Workplace Safety and Health Act
2. Workplace Safety and Health (Risk Management) Regulation
3. Workplace Safety and Health (General Provisions) Regulations
4. Code of Practice on Workplace Safety and Health Risk Management
5. Singapore Standard SS 573: 2012 - Code of Practice for the Safe Use of Powered Counterbalanced Forklifts
6. WSH Guidelines on Safe Operation of Forklift Trucks
7. WSH Council's Forklift Safety Pack
8. WSH Guide To Behavioural Observation and Intervention
9. WSH Council's Guide to Effective Toolbox Meeting by WSH Council
10. WSH Council's Sample Checklist for Pre-Operation of Forklifts
11. WSH Council's Activity Based Checklist for Effective Toolbox Meetings
12. WSH Council's Activity Based Checklist on Safe Use of Forklift Trucks
13. WSHC's Video on Take Time to Take Care (Vehicular Safety)
14. UK Health and Safety Executive's "Use Lift Trucks Safely: Advice for Operators"
15. UK Health and Safety Executive's "Rider-operated Lift Trucks: Operator Training and Safe Use - Approved Code of Practice and Guidance"

Information on the accident is based on preliminary investigations by the Ministry of Manpower as at 13 Aug 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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