

26 February 2018 Ref: 1718217

Accident Advisory: Worker pinned against the top of a lift shaft

Ref: [1718201](#), WSH Alert Accident Notification dated 2 January 2018

On 13 December 2017 around 11.00am, a worker was maintaining a lift in a three-storey private dwelling. The home owner used the lift to travel up to the third storey, unaware that the worker was on top of the lift car. The lift car eventually pinned the worker against the top of the lift shaft. The worker was conveyed to hospital where he succumbed to his injuries the following day.

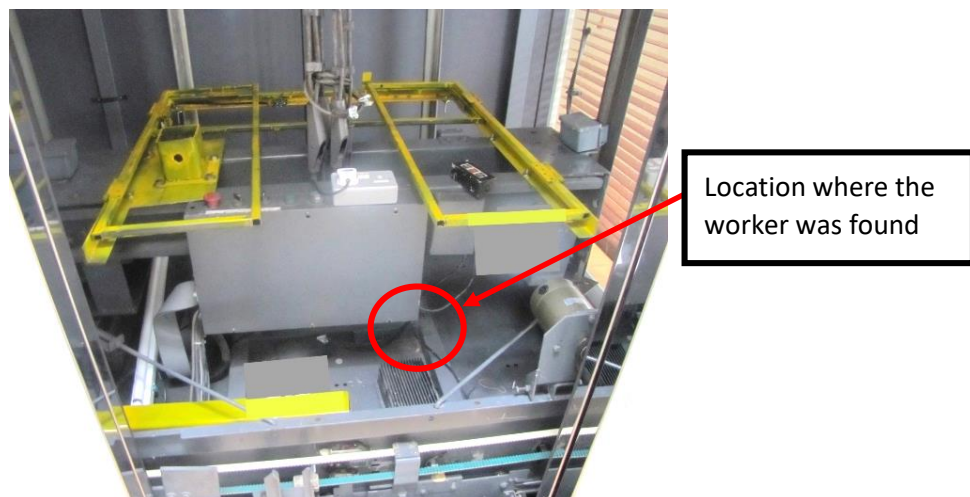


Figure: Top of the lift car where the accident occurred.

Recommendations

Persons in control of similar workplaces and work activities such as occupiers and employers are advised to consider the following risk control measures to prevent similar accidents:

Energy isolation

- It is critical to ensure that hazardous energy sources are isolated before commencing lift maintenance work. This is to prevent the lift from being activated prior to the completion of maintenance work. This can be accomplished through Lockout and Tagout (LOTO) procedure.

- When removing a lift from service, ensure that the lift car is empty and that a “Lift out-of-service” notice and appropriate hazard signs/ entry barriers are in place. Never commence maintenance and repair work when the lift is still in normal operating mode.

Pre-maintenance check

Before working on top of a lift car, lift maintenance personnel should perform the following:

- Place the lift in maintenance or inspection mode;
- Check for proper operation of the lift car’s top controls;
- Ensure that there are means to interrupt the control circuit to prevent undue car movement during maintenance;
- Verify that the necessary control measures have been implemented for all foreseeable risks; and
- Familiarise themselves with the procedures for safely re-activating lift car movement.

Emergency procedure

- Maintenance personnel must be familiar with the emergency response procedure, so that the emergency can be dealt with promptly and safely. Some of the typical emergency scenarios are: entrapment on lift car top, entrapment in lift pit, fire in lift motor room, and injured worker.
- The various emergency situations must be considered before commencing any work so that effective responses can be planned ahead. Self-rescue should only be an option when the hazards are known, the worker is competent and it is assessed to be safe. Otherwise, assistance from a trained emergency response member (e.g., SCDF or a co-worker) must be enlisted.
- During maintenance work, it is important that maintenance personnel who are within and outside the lift hoist way are provided with the effective means to communicate (e.g. through radio communication devices) with rescue personnel during emergencies.

Risk Assessment

Conduct a thorough Risk Assessment (RA) for all work activities to control any foreseeable risk that may arise while carrying out lift maintenance. The RA should consider the following non-exhaustive hazards:

- Entrapment on lift car top
- Hit by stationery parts in lift hoist way
- Shearing by moving parts
- Contact with electrical terminations
- Fall through gap between lift and hoist way
- Emergency response and recovery

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. Building Maintenance and Strata Management (Lift, Escalator and Building Maintenance) Regulations 2016
5. Code of Practice on Workplace Safety and Health Risk Management
6. Singapore Standard SS550: 2009 Code of Practice for Installation, Operation and Maintenance of Electric Passenger and Goods Lifts
7. Singapore Standard SS571: 2011 Code of Practice for Energy Lockout and Tagout
8. Workplace Safety and Health Guidelines for Working Safely during Modernisation, Installation or Dismantling of Electric Passenger and Goods Lifts

* Information on the accident is based on preliminary investigations by the Ministry of Manpower as at 05 January 2018. This may be subject to change as investigations are still on-going. Please note that the information provided here is not exhaustive and for the benefit of enhancing workplace safety and health so that a recurrence may be prevented. The information provided is not to be construed as implying any liability to any party nor should it be taken to encapsulate all the responsibilities and obligations under the law.

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