CALIFORNIA State FACE Program
Fatality Assessment & Control Evaluation

Occupational Health Branch • California Department of Public Health
850 Marina Bay Pkwy, P-3, Richmond, CA 94804
510-620-5757 • fax 510-620-5743

REPORT#: 23CA006 **REPORT DATE:** April 22, 2025

A Warehouse Worker Dies after Falling from an Order Picker Forklift — California

INCIDENT HIGHLIGHTS

DATE:
September 15, 2023

TIME:
3:15 p.m.

VICTIM:
45-year-old

INDUSTRY/NAICS CODE:
Physical distribution/ 541614

EMPLOYER:
Warehouse distribution center

SAFETY & TRAINING:
No policies, procedures, trainings on how to safely work at heights.

SCENE:
Storage rack inside warehouse

LOCATION:
California

EVENT TYPE:
Fall from height

SUMMARY

On Sep 15, 2023, a 45-year-old male warehouse worker (the victim) at a warehouse and distribution center was fatally injured after falling from the platform of an order picker forklift. The victim was operating the order picker to check an item from a shelving rack three levels up. The victim was working by himself and was not wearing fall protection. A co-worker in a nearby aisle heard a sound and ran to the area where they found the victim lying on the concrete floor. The victim was transported to the hospital where he died from his injuries 17 days later… READ THE FULL REPORT> (p.3)

CONTRIBUTING FACTORS

- Failure to ensure proper use of fall protection, inspect equipment, and correct unsafe work practices
- Lack of written policies and procedures on how to safely operate forklifts and use fall protection
- No forklift training or certification program
- Lack of audible or visual alarms on forklifts to indicate when an employee is not tied-off…LEARN MORE> (p.7)

RECOMMENDATIONS

California FACE (CA/FACE) investigators determined that, in order to prevent similar incidents, warehouses & distribution centers and forklift manufacturers should:

- Ensure that all order picker forklift operators receive training and adequate supervision to always use fall protection when working at heights.
- Integrate fall protection warning devices that will activate audible and visual alarms if the operator is not tied-off while working at heights…LEARN MORE> (p.7)

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Fatality Assessment and Control Evaluation (FACE) Program

This case report was developed to draw the attention of employers and employees to a serious safety hazard and is based on preliminary data only. This publication does not represent final determinations regarding the nature of the incident, cause of the injury, or fault of employer, employee, or any party involved.

This case report was developed by the California Fatality Assessment and Control Evaluation (FACE) program. California FACE is a NIOSH-funded occupational fatality surveillance program with the goal of preventing fatal work injuries by studying the worker, the work environment, and the role of management, engineering, and behavioral changes in preventing future injuries. The FACE program is located within the Occupational Health Branch, California Department of Public Health.

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INTRODUCTION

On, September 15, 2023, at approximately 3:15 pm, a 45-year-old male warehouse worker (the victim) was working on the platform of an order picker forklift when he fell approximately 20 feet to the floor below at a warehouse and distribution center. The victim died from his injuries 17 days later on October 2, 2023. The CA/FACE investigators received notification of this incident on October 8, 2023, from the weekly summary from the California Department of Industrial Relations Public Information Office. On May 13, 2024, the CA/FACE investigators contacted the warehouse facility where the incident occurred. A site inspection and interviews with the company human resources representative, warehouse supervisor, and site manager were conducted by the CA/FACE investigator on June 5, 2024. Photographs of the incident scene were taken, and the fire department, coroner, and Cal/OSHA reports were requested and reviewed.

EMPLOYER

The employer was a global warehouse and distribution company that employed over 1,500 employees at multiple locations worldwide. The company provided transportation, warehousing, and storage. The incident took place at one of their California warehouses that had about 30 permanent and temporary employees. The warehouse was in operation seven days a week from 9:00 a.m. to 10:00 p.m. with two work shifts.

WRITTEN SAFETY PROGRAMS and TRAINING

At the time of the incident, the employer had an injury and illness prevention program (IIPP) but did not have any specific written policies or procedures for forklift use or fall protection. According to training records, the victim attended an in-house forklift safety training in 2020 but it was not confirmed what language this was offered in. The company's human resources representative stated that employees received general warehouse training (orientation and specifics for their positions) and fire evacuation training.

WORKER INFORMATION

The victim was a 45-year-old male warehouse worker who was a team leader. He had worked for 3 ½ years for this employer, but only four months at the warehouse where the incident occurred. He oversaw ten employees and his responsibilities included training team members and monitoring their job performance, operating the order picker, retrieving items from storage racks, and communicating with the site supervisor. The victim's primary language was Mandarin.

INCIDENT SCENE

The warehouse was approximately 200,00 square feet with 85 aisles and six packing and shipping areas. The company stored, packed, and shipped a variety of items from small toys to large pieces of furniture. Each aisle had up to five levels of shelving racks as seen in Exhibit 1. According to the employer, heavy items were typically stored on lower racks. If there happened to be a heavy item on an upper rack, employees would lower the entire pallet down using a forklift and implement a buddy system to move the item as needed.

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Exhibit 1: Warehouse with storage racks.

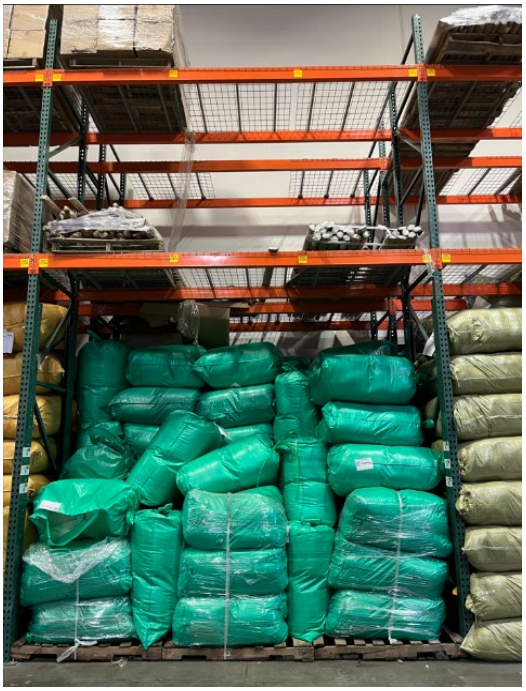

Exhibit 2: Closeup of the storage racks.

Photos courtesy of CA/FACE program.

At the time of the incident, the victim was operating an order picker forklift to get an item from a shelving rack three levels up, approximately 20 feet high (Exhibit 2). Co-workers reported that their usual practice was to stand on the platform of the order picker to retrieve an individual item.

EQUIPMENT

The warehouse had different forklifts that were operated from a sitting or standing position. Employees used a specific forklift according to the item that was to be placed or retrieved from the racks. On the day of the incident, the victim was operating a Yale electric high lift stand-up order picker forklift (model unknown) (Exhibit 3). The order picker forklift was equipped with a multifunction control handle, a telematics system to complete pre-shift inspections, a red operator sensing button located on the platform to energize the system, and lateral arms. There was a full body harness and a self-retracting line attached to the forklift anchor point.

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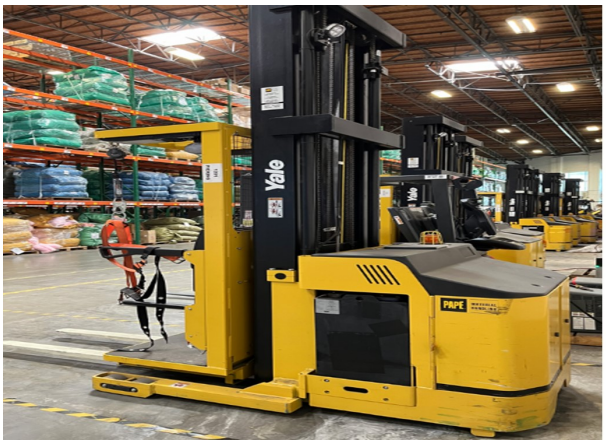

Exhibit 3: The order picker forklift involved in the incident. The arrow indicates where the self-retracting lanyard connected to the body harness was hooked to the forklift. Photo courtesy of CA/FACE program.

WEATHER

The weather on the day and time of the incident was approximately 78 degrees Fahrenheit, with an average wind speed of about 8 mph [Weather Underground]. The temperature inside the warehouse was unknown. The outdoor weather and indoor temperature were not contributing factors in this incident.

INVESTIGATION

On the day of the incident, the victim was working the first shift that began at 9:15 a.m. and ended at 6:00 p.m. The victim was using an order picker forklift to reach an item on the 3rd level storage rack. The order picker was parked parallel to the rack and the victim was standing on the forklift platform similar to the one shown in Exhibit 4. Because the incident was unwitnessed, it is not known if he was checking or retrieving the item, the type/weight of the item, or how far away the order picker was from the racks when he fell. According to the employer, the victim was working by himself and was not wearing fall protection while operating the order picker. The employer and co-workers stated that the usual policy was to tie off to the order picker when operating the machine (Exhibit 5). Employees were expected to keep the body harness on throughout the work shift, but could unhook the lanyard from the harness while working on the ground level.

At approximately 3:15 p.m., two co-workers heard a strange sound nearby and went to investigate. They found the victim laying on the concrete floor between the order picker and the racks. He was unresponsive and had apparent head trauma. The company's human resources specialist called 911 for help. The fire department arrived onsite and transported the victim to a nearby hospital around 3:45 p.m. Upon arrival, the victim was in an altered mental state and was non-verbal. Despite treatment the victim did not regain consciousness and died 17 days later on October 2, 2023.

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Exhibit 4: Worker retrieving item off shelf using a order picker forklift. Photo courtesy of Yale.

Exhibit 5: The arrows indicate an adequate tie off when operating the order picker. Photo courtesy of CA/FACE program.

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CAUSE OF DEATH

According to the county coroner, the cause of death was due to sequalae of blunt trauma.

CONTRIBUTING FACTORS

Occupational injuries and fatalities are often the result of one or more contributing factors or key events in a larger sequence of events that result in the injury or fatality. CA/FACE investigators identified the following unrecognized hazards as key contributing factors in this incident:

- Failure to ensure proper use of fall protection, inspect equipment, and correct unsafe work practices
- Lack of written policies and procedures on how to safely operate forklifts and use fall protection
- No forklift training or certification program
- Lack of audible and visual alarms on forklifts to indicate when an employee is not tied-off

RECOMMENDATIONS/DISCUSSION

The CA/FACE investigators concluded that, to prevent similar incidents, employers should:

Recommendation #1: Ensure that all order picker forklift operators receive training and adequate supervision to always use fall protection when working at heights above 4 feet.

Discussion: In warehouse operations where it is necessary for employees to pick items off high shelves, employees should receive training and supervision on the use of forklifts and fall protection. In this incident, the victim did not use fall protection when he was checking or retrieving an item from a 3rd level storage rack. The order picker forklift was equipped with a full body harness and self-retracting lanyard, but it is not known how often this fall protection was used by the victim or other warehouse workers. According to the fire department report, the victim fell from approximately 20 feet. The victim may have stepped off the order picker to reach the item which caused him to lose his balance and fall to the concrete floor below.

It is important that employers develop and implement a written training and certification program for operating forklift trucks, and ensure workers wear either fall protection or seatbelts according to policy requirements. Knowledgeable and competent professionals should periodically review the training curriculum. This training should include both classroom and hands-on training on general forklift operations, loading techniques, and safety practices. Employees who complete the training would be certified to use the equipment until due for annual refresher training. It is crucial to document participation in the training and keep records up to date. Operators should learn about different types of forklifts, how each model varies and may operate differently in certain situations. For example, how the forklift behaves with a full load and at various speeds, how much distance is required to stop, and how to use fall protection or seatbelts. Written and enforceable policies and procedures should be established and maintained to ensure that employees use the full body harness when retrieving items on upper shelves. If the victim had been fully trained and certified on forklift operation, was wearing fall protection and was adequately supervised, this fatality may have been prevented.

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In addition, forklift manufacturers should:

Recommendation #2: Integrate fall protection warning devices that will activate audible and visual alarms if the operator is not tied-off while working at heights. Warehouses should consider installing these warning devices on their forklifts when available.

Discussion: In this incident, the victim raised the platform of the order picker forklift so he could reach or check an item on the third level storage rack. Since he was working at a height above 4 feet, the operator should have worn a body harness and a self-retracting line which was tied-off to the harness and the forklift. The lanyard length for a personal fall arrest system should be such that the operator has freedom of movement in the working area and should be rigged such that an employee can neither free fall more than 4 feet nor contact any lower level.

At least one partially Integrated system is now available that prohibits the forklift from being raised if the operator's lanyard is not connected. These systems activate audible and visual alarms if the operator unhooks either end of the lanyard when the lift is raised. This type of warning system used in conjunction with a strictly enforced mandatory tie-off/no unhook policy may have prevented the victim from using the order picker forklift without fall protection.

DISCLAIMER

Mention of any company or product does not constitute endorsement by California FACE and the National Institute for Occupational Safety and Health (NIOSH). In addition, citations to websites external to California FACE and NIOSH do not constitute NIOSH endorsement of the sponsoring organizations or their programs or products. Furthermore, California FACE and NIOSH are not responsible for the content of these websites. All web addresses referenced in this document were accessible as of the publication date.

REFERENCES:

California Code of Regulations, Title 8, Subchapter 7. General Industry Safety Orders
Group 1. General Physical Conditions and Structures Orders §3203. Injury and Illness Prevention Program

California Code of Regulations, Title 8, Subchapter 7. General Industry Safety Orders
Group 4. General Mobile Equipment and Auxiliaries §3656. Order Pickers and Stock Pickers

OSHA FatalFacts Warehouse Fall from Pallet Elevated by Forklift
https://www.osha.gov/sites/default/files/publications/OSHA3916.pdf

Example technology that limits forklift operation if a proper connection is not detected between a self-retracting lanyard and an operator's harness: iWarehouse Integrated Tether System

INVESTIGATOR INFORMATION

This investigation was conducted and authored by Ingrid Zubieta, MPH, CIH, CSP, CA/FACE Fatality Investigator/Consultant. Additional contributions to the report were provided by Robert Harrison, MD, MPH,

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