



The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces
through safety and health research



Assistant Manager Dies After 15-Foot Fall From Forklift-Suspended Pallet–South Carolina

FACE 9520

SUMMARY

On September 6, 1995, a 47-year-old male assistant warehouse manager (the victim) of an automotive tire and service center died after falling 15 feet from a forklift-suspended pallet and striking his head on a concrete floor. The victim was working with a forklift, pulling tires for orders and logging tire- inventory sheets. The men were pulling the tires from a section of bins, 4-bins high and 8-bins wide. The men set a 5-foot-square wooden pallet on the forks of the machine, then set a steel rack on top of the pallet to help secure the tires when loading and unloading. The steel rack was not attached to the pallet. The forklift driver then raised the victim, who was standing on the pallet but not wearing a safety belt or lanyard, to the top row of bins, approximately 16 feet above the concrete floor. The victim had placed 10 to 12 tires on the pallet when the forklift operator looked up and saw that the pallet and rack were unstable. The victim lost his balance and fell to the floor, striking his head. The forklift operator saw the victim try to stand and then saw him fall. He went to the front counter and told a worker to call the emergency medical service (EMS) then returned to the warehouse to assist the victim. The victim was found unconscious but breathing. The EMS responded within 8 minutes and transported the victim to the hospital. The victim was removed from life support 1 week later and pronounced dead. NIOSH investigators concluded that, in order to prevent similar incidents, employers should:

- ensure that workers continually adhere to the safe work procedures that have been established by the employer
- provide workers with a firmly secured work surface
- encourage all employees to actively participate in workplace safety
- routinely conduct scheduled and unscheduled worksite safety inspections.

INTRODUCTION

On June 6, 1995, a 47-year-old male assistant warehouse manager (the victim) of an automotive tire and service center died after falling 15 feet from a forklift-suspended pallet and striking his head on a concrete floor. On August 22, 1995, officials from the South Carolina Occupational Safety and Health Administration (SCOSHA) notified the Division of Safety Research (DSR) of this fatality, and requested technical assistance. On September 21, 1995, a DSR safety specialist conducted an investigation of the incident. The incident was reviewed with employer representatives and the SCOSHA compliance officer. Photographs of the scene taken immediately after the incident were reviewed during the investigation.

The employer in this incident was an auto and tire service center with a tire warehouse that had been in operation for 13 months under the present management and employed 6 workers. The company had written safe-work procedures which were presented to new employees during their orientation training. This training involved, but was not limited to, safety and environmental issues, proper use of personal protective equipment, and employee standards of conduct. Additional training was performed on the job. Forklift drivers attended company operator safety training. Warehouse managers and assistant managers completed monthly safety/quality inspection reports and were responsible for enforcing safety rules on work activities, use of PPE, and forklift safety in the warehouse. The victim had worked for the employer for 1 month. This was the first fatality experienced by the present management.

INVESTIGATION

Daily activities in the warehouse included the receipt and storage of bulk tires and auto parts. Inventory was then pulled and shipped to other stores or used to repair cars at the facility.

On the day of the incident, the victim was working with a forklift driver pulling tires for orders and logging tire inventory sheets. The men were pulling the tires from a section of bins, 4-bins high and 8-bins wide. Each bin was 5-foot-square by 67-inches high. Normal procedures directed the men to set a 5-foot-square wooden pallet on the forks of the machine, then set a steel rack measuring 5-foot-square by 69-inches high on top of the pallet to help secure the tires when loading and unloading. The pallet was not secured to the forks, nor was the steel rack secured to the pallet. After this was accomplished, the victim stood on the pallet and was raised approximately 16 feet above the concrete floor to the top row of bins by the driver. The victim was not wearing his safety belt or lanyard as required by company safety procedures.

The victim had placed 10 to 12 tires on the pallet when the driver looked up and noticed that the pallet and rack were becoming unstable as the victim reached into a bin. The pallet began to move and the victim lost his balance and fell to the floor, striking his head. The rack and tires followed the victim to the floor.

The driver saw the victim attempt to stand, then fall over, and ran to the front counter to tell a worker to call the emergency medical service (EMS). He then returned to the warehouse to assist the victim. He found the victim breathing but unconscious. The EMS personnel arrived within 8 minutes and transported the victim to the hospital. The victim was removed from life support 7 days later and declared dead.

CAUSE OF DEATH

The medical examiner listed the cause of death as skull fracture.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Employers should ensure that workers continually adhere to the safe work procedures that have been established by the employer.

Discussion: Employers should continually stress the importance of adherence to established safe work procedures. In this instance, a safety belt and lanyard were provided, and required when work was performed above ground. During employee interviews it was learned that the workers often did not wear the safety belts and lanyards because the lanyard had to be wrapped around the forklift mast to tie off, restricting movement. Since the incident, the employer has attached an anchor point to the mast carriage that allows the employee to move freely when the lanyard is attached.

Recommendation #2: Employers should provide workers with a firmly secured work surface.

Discussion: In this incident, a pallet to be used as a work surface was placed unsecured on the forks of the lift and a steel rack was placed unsecured on the pallet. This created the potential for dislodging the pallet due to bumping by the tires when they were placed on the pallet, or uneven loading of the pallet, making the work surface unstable. In this instance, when the pallet became unstable, the victim lost his balance and fell, causing the rack and tires to fall. Since the incident,

the employer has permanently anchored the rack to the pallet with bolts, providing for a more stable work surface. Additionally, 29 CFR 1926.602 (c)(1)(viii)(A) requires that whenever a truck is equipped with vertical only, or vertical and horizontal controls elevatable with the lifting carriage or forks for lifting personnel, a safety platform firmly secured to the lifting carriage and/or forks shall be used as an additional precaution for the protection of the personnel being elevated. Although this regulation pertains to construction activities, all work platforms should be secured to forklift forks to ensure worker safety.

Recommendation #3: Employers should encourage all employees to actively participate in workplace safety.

Discussion: Employers should encourage all workers to actively participate in workplace safety and should ensure that all workers understand the role they play in the prevention of occupational injury. In this instance, the victim, a supervisor, stepped on the pallet without attaching his lanyard, in violation of established safety rules. Workers and co-workers should look out for their personal safety and the safety of co-workers. When workers observe hazardous conditions or activities, they should, depending on the circumstances, notify management and/or remind co-workers of the proper way to perform their tasks and protect themselves. Employers must instruct workers of their responsibility to participate in making the workplace safer. Increased worker participation will aid in the prevention of occupational injury.

Recommendation #4: Employers should routinely conduct scheduled and unscheduled worksite safety inspections.

Discussion: Employers should be aware of any potential hazards or unsafe work conditions or practices in the workplace and should take an active role to eliminate them. Scheduled and unscheduled safety inspections should be conducted by a competent person to ensure that the workplace is free of hazardous conditions. Even though these inspections do not guarantee the prevention of occupational injury, they may identify hazardous conditions and activities that should be rectified. Further, they demonstrate the employer's commitment to the enforcement of the safety program and to the prevention of occupational injury.

REFERENCES

29 CFR 1926.602 (c)(1)(viii)(A) Code of Federal Regulations, Washington, D.C.: U.S. Government Printing Office, Office of the Federal Register.

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