

## **Truck Driver Dies After Falling 12 Feet While Securing A Load of Roof Trusses**

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**DATE:** December 2, 1993

### **SUMMARY**

On July 14, 1993 a 54 year-old male truck driver was critically injured after falling 12 feet from a load of wooden roof trusses he was securing on the trailer of his truck. The incident occurred after the victim had climbed on top of the load and was securing the trusses with a hand-operated metal strap bander. As he was using the bander he apparently slipped, falling 12 feet to the ground and injuring his head. He died of his injuries on July 31, 1993, 17 days after the incident. NJDOH FACE investigators concluded that, in order to prevent similar incidents in the future, these safety guidelines should be followed:

- **Employers should conduct a job hazard analysis of all work activities with the participation of the workers.**
- **Employers should explore alternate methods of securing trusses to the trailers.**
- **Employers should develop and implement a comprehensive safety program with the assistance of a joint labor/management safety committee.**

### **INTRODUCTION**

On August 4, 1993, NJDOH FACE investigators were notified by the county medical examiner's office of a death resulting from a work related fall. After contacting the company, FACE investigators conducted a site visit on August 24, 1993 to interview the employer and photograph the incident site. Additional information was gathered from the OSHA investigation file and the police and medical examiner's reports. Witnesses were not interviewed at the request of the employer.

The employer was a manufacturer of pre-fabricated roof and floor trusses who has been in operation for over 11 years. The company employed a total of 32 employees, including three truck drivers who delivered the trusses to customers. The victim was a 54 year-old male truck driver who had worked for the company for over five years. Prior to this job the victim worked in construction for 22 years, including 19 years as a house framer.

### **INVESTIGATION**

The incident occurred at the company's shipping yard adjacent to the main manufacturing shop. The trusses (which are the wooden framework pieces that support a roof or floor) are custom built with two-by-four boards to contractor specifications. The roof trusses are usually triangular in shape (the apex of

the triangle being the peak of a slanted roof) but may also be flat for a floor or flat roof. Once built, the trusses are banded together into packages to facilitate shipping.

The company owned a small fleet of trucks and trailers and employed three truck drivers to deliver the trusses. Two types of trailers were used, depending on the size and type of truss. A flatbed trailer equipped with rollers was used for smaller pieces, while a Barnes or pole trailer was used for larger triangular trusses. The Barnes trailer is a two-section trailer with a metal support bracket built on each section (see figure 1). The two trailer sections are joined by a heavy metal pole and chain that can be expanded to accommodate the size of the load. The trailer is loaded by forklift trucks that set the packages of trusses upside (peak) down onto the trailer supports. The forklifts also support the trusses until they are secured to the trailer with metal bands and nylon straps.

The day of the incident was a clear Wednesday morning. The victim arrived for work at his usual time of 6:30 a.m. and prepared for his first delivery of the day, a load of 40 triangular roof trusses. The trusses, which were of varying sizes, were divided into six packages and evenly loaded onto a Barnes trailer with two forklift trucks. As the forklifts held the load in place, the victim inspected the load and decided to further secure it to the trailer with steel strapping bands. He climbed to the top of the load and began securing the separate truss packages together with steel bands. A second employee was also placing bands at the bottom of the load at ground level. Moving from the front of the trailer to the rear, the victim knelt on the truss packages and pulled the handle of a steel band strapper, tightening the bands. He had successfully completed six bands and was working on the next when the steel band slipped or broke with a snapping sound. The victim came off the load, falling 12 feet and striking his head on the hard packed dirt and gravel. His co-workers immediately went to his aid and notified the police and Emergency Medical Service who quickly responded. He was then air lifted to the regional trauma center where he died on July 31, 1993, 17 days after the incident.

As no one directly witnessed the incident, it is not known defiantly why the victim fell from the load. It is possible that he was using two hands to operate the lever of the bander, over-tightening the band and causing it to break or slip. This could not be determined as the steel band he was tightening could not be examined since it was inadvertently discarded after the incident. The company continued to use the bander without any problems until advised by their legal counsel to take it out of service.

## **CAUSE OF DEATH**

The county medical examiner attributed the cause of death to craniocerebral and cervical injuries. An autopsy was not conducted in this case.

## **RECOMMENDATIONS/DISCUSSIONS**

**Recommendation #1: Employers should conduct a job hazard analysis of all work activities with the participation of the workers.**

Discussion: It is recommended that employers conduct a job hazard analysis of all work areas with the employees. A job hazard analysis (as described in the attached OSHA publication) should examine all

work areas for fall, electrical, chemical, or other hazards the workers may encounter. After identifying the hazards, the employees should be instructed on how to correct or avoid them.

**Recommendation #2: Employers should explore alternate methods of securing trusses to the trailers.**

Discussion: In this case the driver needed to climb on top of the load in order to secure it. It is recommended that the employer explore different methods of securing truck loads. This may include using hand tightened straps that can be secured from the ground instead of of the steel bands. It may also be possible for the employee to secure the load from a stable elevated platform instead of the top of the load. Such a platform would also allow the use of a fall protection harness.

**Recommendation #3: Employers should develop and implement a comprehensive safety program with the assistance of a joint labor/management safety committee.**

Discussion: The employer in this case did not have a written safety program. It is recommended that employers emphasize worker safety by developing, implementing, and enforcing a comprehensive safety program to reduce or eliminate hazardous situations. This program, as developed with the assistance of a joint labor/management safety committee, should include the recognition and avoidance of hazards identified by the job hazard analysis and include appropriate worker safety training. Records should be kept of any training conducted.

**ATTACHMENTS**

Job Hazard Analysis. OSHA 3071, US Department of Labor, Occupational Safety and Health Administration, Washington DC. 1988.

Information Bulletin: Joint Labor/Management Safety & Health Committees. NJ Department of Health, Public Employees Occupational Safety and Health Program, Trenton NJ.

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