

MIFACE INVESTIGATION REPORT #12MI054

SUBJECT: Truck Porter Dies From Head Injury Complications When He Fell From Either the ICC Bumper or Deck of a Semi-Trailer

Summary

In summer 2012, a male truck porter in his 60s died due to head injuries sustained in an unwitnessed fall. The truck trailer had been loaded with empty kegs which had been shrink-wrapped and placed on pallets. The pallet-keg combination weighing approximately 470 pounds was loaded by forklift into the trailer. When the trailer was loaded, the decedent drove the semi-truck/trailer to the fueling area. The decedent opened the trailer door to place the shipping manifest in the semi-trailer. Although the injury sequence of events was unknown, the decedent most likely used the Interstate Commerce Commission (ICC) bumper to access the trailer deck. It is unknown if the decedent was on the ICC bumper or had stepped up onto the deck at the time of his fall. In an attempt to regain his balance, he grabbed the shrink-wrapped kegs and as he fell, the kegs and pallet were pulled down with him. The decedent was found by a coworker lying on his back on the ground with a wooden pallet on his legs and empty kegs strewn around him. The coworker ran to a nearby building and requested assistance. Emergency response was called, and the decedent was transported to a local hospital where he died several days later from the head injuries sustained at the time of the incident. The incident investigation found one shipping manifest on the deck of the trailer and the second manifest under the trailer.



Figure 1. Overview of incident scene

Possible Contributing Factors to this incident:

- Using the ICC bumper as an access to the trailer deck.
- Height of shipping manifest pocket on the trailer wall.

RECOMMENDATIONS

- Develop a written truck yard health and safety program that includes safe work procedures for truck porters.
- Ensure access ladders available to workers to climb onto trailer deck.
- Employers and/or trailer manufactures should consider mounting the shipping manifest pocket at a height easily accessed from ground level.

BACKGROUND

In summer 2012, a male truck porter in his 60s died due to head injuries sustained in an unwitnessed fall. MIFACE learned of this incident from the MIOSHA 24-hour ASAP notification. The MIFACE researcher contacted the decedent's employer who agreed to participate with the MIFACE program. The MIFACE researcher spoke with and was accompanied by the firm's Controller and additional firm personnel to look at the facility operations and similar trucks. When writing this report, MIFACE reviewed the MIOSHA compliance file and pictures, the police and medical examiner reports, and the death certificate. All photographs used in this report have been altered by MIFACE to ensure the employer's anonymity.

The employer was a long established beverage wholesaler that employed more than 240 individuals. The decedent was one of two truck porters. He worked part time (approximately 20-25 hours/week) for approximately 4.5 years. He usually began work at approximately 2:00 p.m. concluding his shift at approximately 7:00 p.m. His job responsibilities included driving the switcher tractor to pull loaded trailers out of the dock and replace them with empty trailers and prepare trucks for transport. Preparing a truck for transport included fueling and washing trucks and placing shipping manifests in the trailer. He did not have nor was he required to have a commercial driver's license (CDL). The decedent had received on-the-job training.

The firm did not have a written safety and health program. The firm had a labor/management health and safety committee which held monthly meetings. Team meetings that included health and safety training were routinely held. The firm provided and required non-slip safety shoes to be worn; it is unknown if the decedent was wearing this type of shoe at the time of the incident.

Firm Remediation after the Incident

The company implemented the following system: after the trailers are loaded, the individual loading the trailers places the manifest in the trailer pocket and seals the trailer doors with a lock to preclude the porter from opening the trailer doors.

The MIOSHA Safety and Health Division issued a Health and Safety Recommendation at the conclusion of its investigation:

MIOSHA SAFETY RECOMMENDATION

An inspection/investigation of your worksite revealed the following condition(s) which may constitute a safety or health hazard to your employee(s).

Develop, implement, train, and enforce a written truck yard safety program for all affected truck porters, which includes, but is not limited to the following provisions:

- Establish procedures to prevent employees from using the ICC bumper of the trailers to gain access to the trailers. In the event access to the trailer is required, provide a portable ladder stand to gain access.
- Provide and enforce the use of high visibility clothing or vests while employees are working in the yard.

INVESTIGATION

Trailer Description

The semi-trailer was loaded with empty beer kegs destined for return to their respective brewery. The trailer involved in the incident was a 54-foot-long rear load trailer with two access doors that opened outward. The Interstate Commerce Commission (ICC) bumper “step” was located 24 inches above the ground and the trailer deck was located approximately 48 inches from the ground.

The trailer had been loaded with 25 stacks of pallets in a honeycomb pattern. Each stack contained four specifically designed keg pallets which held four kegs each. The last two pallets loaded were shrink-wrapped with plastic to provide added stability and to prevent them from falling when the trailer doors were opened. Company personnel indicated that forklift drivers were instructed to place the last two shrink-wrapped pallets approximately 12 inches to 18 inches from the rear of the trailer. Each stack of four pallets weighed approximately 470 pounds.

Incident

The decedent, who was not wearing a hard hat or high visibility vest, had positioned two trucks/trailers at the fuel island. While one truck was fueling, it appeared that he was attempting to place the shipping manifest in the pocket on the trailer wall at the rear of the incident semi-trailer. The height of the manifest pocket from ground level is unknown.

The decedent opened the passenger side rear trailer door to place the shipping manifest in the semi-trailer. Although the injury sequence of events was unknown, the decedent most likely used the ICC bumper to access the trailer deck. It is unknown if the decedent was on the ICC bumper or had stepped up onto the deck at the time of his fall. The most likely scenario was the decedent, while using the ICC bumper as an access to the trailer deck, used the kegs to provide support as he accessed the trailer deck. He lost his balance while climbing up to place the manifest in the pocket located inside the trailer, and, as he fell, the kegs/pallets fell with him. Another possible scenario was that he successfully accessed the trailer deck but tripped on a pallet. In an attempt to regain his balance, he grabbed the shrink-wrapped kegs. As he fell, the kegs and pallet were pulled down with him.

A coworker noted the empty kegs on the ground and walked to the trailer to assist in loading the kegs back into the truck. The coworker found the decedent lying on his back on the ground with a wooden pallet on his legs and empty kegs strewn around him. The coworker ran to a nearby building and requested assistance. Emergency response was called. CPR was provided by a company-registered EMT while awaiting EMS to arrive. Emergency response transported the decedent to a nearby hospital where he died several days later from the head injuries sustained at the time of the incident.

Management indicated to the MIFACE researcher that it was not common for kegs/pallets to fall out of a rear-load trailer, although kegs had fallen from a side-load trailer.

RECOMMENDATIONS/DISCUSSION

- Develop and enforce a written yard safety health and safety program that includes safe work procedures for truck porters.

A yard safety health and safety program will identify and mitigate the safety and health hazards for truck porters. Safety and health items which could be addressed include: vehicle operations (e.g. vehicle inspection, chocking, access/egress from cab/trailers, safe fueling, coupling/uncoupling trailers, trailer door operation, etc.) and general safety (pedestrian safety, high visibility vests, speed limits, outdoor temperature safety, etc.).

- Ensure access ladders are available to workers to climb onto trailer deck.

Accessing the trailer deck using the ICC bumper is not ideal. There are no handholds for support and limited foot support space. A safer solution to access the trailer deck would be an easily transportable access ladder that is lightweight and offers safe access to the trailer deck in all weather conditions (e.g., slip resistant steps, handrails). Solutions could include a rolling portable ladder (See Figure 2) or permanently mounted brackets for a portable access ladder.



Figure 2. [Example of trailer access ladder](#)

- Employers and/or trailer manufactures should consider mounting the shipping manifest pocket at a height easily accessed from ground level.

The height of the pocket in the trailer required the decedent to climb up to the trailer deck. Care must be taken to protect the manifest pocket from forklift traffic into and out of the trailer. If the pocket height was lowered to a level that permitted placement of the shipping manifest from ground level, the incident could have been prevented.

KEY WORDS: Fall, truck driver, ICC bumper, beer kegs, Wholesale Trade

RESOURCES

MIOSHA standards may be found at and downloaded from the MIOSHA, Michigan Department of Licensing and Regulatory Affairs (LARA) website at: www.michigan.gov/mioshastandards. MIOSHA standards are available for a fee by writing to: Michigan Department of Licensing and Regulatory Affairs, MIOSHA, Technical Services Division, Regulatory Services Section, P.O. Box 30643, Lansing, Michigan 48909-8143 or calling (517) 322-1845 (new phone number effective August 10, 2015 will be (517) 284-7740).

- Transforce, Inc. *Yard Safety*. In the Safety Zone™, Volume 4, Issue 4, June 2011.
<http://www.transforce.com/wp-content/uploads/2012/07/TFISafetyNewsletterv4i4.pdf>
- Ballymore Safety Ladders: <http://www.ballymore.com/products/steel-rolling-ladders/truckdock-access-ladder>
- Gateway Supply- Deckmate ladder. <http://www.gatewaysupplytx.com/>

MIFACE (Michigan Fatality Assessment and Control Evaluation), Michigan State University (MSU) Occupational & Environmental Medicine, 909 Fee Road, 117 West Fee Hall, East Lansing, Michigan 48824-1315; <http://www.oem.msu.edu>. This information is for educational purposes only. This MIFACE report becomes public property upon publication and may be printed verbatim with credit to MSU. Reprinting cannot be used to endorse or advertise a commercial product or company. All rights reserved. MSU is an affirmative-action, equal opportunity employer.

July 27, 2015