

Semi-Truck Driver Dies After Being Struck by Flatbed Driver in Crossover Collision

Incident Number: 11KY001



Semi that crossed median then struck by another semi of which the driver died. Photograph property of KY FACE

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Kentucky Fatality Assessment and Control Evaluation (FACE) Program

Incident Number: 11KY001

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Subject: Semi-Truck Driver Dies After Being Struck by Flatbed Driver in Crossover Collision

Summary

In the winter of 2011, a 46-year-old semi-truck driver (D1) hauling a flatbed trailer was traveling north in the right lane on a four lane interstate. Several minutes ahead of the semi was a pickup truck hauling an extension ladder that fell out onto the northbound travel lanes. A car behind the pickup swerved to avoid the falling ladder. Other cars swerved to avoid the ladder. The semi came upon the ladder and swerving cars. To avoid striking the cars and ladder, the semi driver swerved to the right, over-corrected to the left, drove across the northbound lanes, over a cable barrier, then into the southbound travel lanes. Another semi-truck driver (D2) traveling in the right southbound lane pulling a 53' trailer struck the cab of the northbound semi. D2 died at the scene, and D1 was ejected and found alive under the right steer tire.

To prevent future occurrences of similar incidents, the following recommendations have been made:

Recommendation No. 1: Loads in open pickup truck beds should be firmly secured before transport.

Recommendation No. 2: Ladders should be labeled by manufacturers to inform users on the importance of securing ladders during transport.

Recommendation No. 3: Retail outlets should locate signage in the ladder area to instruct customers on the importance of load securement.

Recommendation No. 4: Law enforcement should be alert for load securement issues in open bed trucks and issue citations for non-secure transport of ladders.

Recommendation No. 5: Brakes on commercial vehicles should be maintained in proper working order.

Background

The company D1 worked for was a North American based transport company that employed 85 drivers and 87 power units. Being classified as "Authorized for Hire", the interstate company transported general freight, metal sheets, coils, and rolls, building materials, machinery, fresh produce, and refrigerated food. The company had safety and compliance programs. The employment history for D1 is unknown.

D2 worked for a transport company with 10,000 drivers and 10,512 power units, and was classified as Authorized for Hire, and transported United States mail. Cargo carried included general freight, metal sheets, coils, and rolls, logs, lumber, building materials, intermodal equipment, oilfield equipment, grain, feed, hay, meat, US mail, chemicals, refrigerated food, beverages, and paper products. The company had both safety and compliance programs. The employment history of D2 is unknown.

Investigation

The Kentucky Fatality Assessment and Control Evaluation Program was notified of an occupational fatality involving two semis. Interviewed for this report were the towing company, environmental cleanup company, and the local police department. A site visit was made, and photographs were taken.

In the winter of 2011, a severe winter storm had been predicted. At approximately 5:00 PM, in preparation of the impending inclement weather, a salt truck spread brine on a two-lane northbound section of interstate. At that time, both lanes were clear and free of debris. There was a four-strand cable barrier running parallel to the northbound inner shoulder. The roadway was straight coming out of a slight right-hand curve.

Roughly thirty minutes later in the same section of interstate, a pickup truck traveling in the left lane was transporting an unsecured extension ladder in the bed with the tailgate in the down position. A sedan (S1), manufactured in 2008, with three passengers was also in the left lane several seconds behind the pickup truck. As S1 followed the pickup truck, the ladder began to fall from the bed. To avoid the falling ladder, the driver of S1 applied the brakes, veered to the right, then veered to the left, struck the ladder, and went into a counter-clockwise spin. The sedan struck the cable barrier temporarily lowering it, recoiled into a clockwise spin, and then rebounded back into the northbound lanes. The driver of the pickup truck did not apply the brakes or slow down, but kept driving away from the fallen ladder.

A second sedan (S2), manufactured in 1988, occupied by only the driver, was in the left lane following behind S1. As events began to unfold, S2 applied the brakes and began to skid. A 46-year-old semi-truck driver (D1) operating a 2006 semi with a sleeper cab, hauling large machinery on a flatbed trailer, was traveling in the right lane beside S2. S2 entered the right lane and was struck in the right front fender by D1's left front bumper. Due to this collision, the left front tire of D1 locked up then released. S2 slid counterclockwise away from D1 into the cable barrier. D1 applied the brakes, steered to the right to try and avoid the cars and ladder, continued north for a short distance then veered toward the median. As D1 was veering toward the median, S1 was returning to the left lane when D1 struck S1 in the right rear of the passenger side which spun S1 back into the cable barrier. D1 then continued over the cable barrier that S1 had temporarily pushed it down. D1 crossed the median into traffic on the southbound side of the interstate. Another 46 year-old semi driver (D2) pulling a box trailer was in the right southbound lane. As D1 crossed the right travel lane, D2 struck D1 in the sleeper berth on the passenger side. Emergency services were contacted and arrived at the scene. D1 was found under the right steer tire, and D2 was declared dead at the scene.

According to the police report, D1 did not apply the brakes after leaving the northbound travel lanes. A forensic mechanic inspected D1's semi and found the right brake defective. That defect caused the semi to veer to the left when the driver initially applied the brakes. Speeding was not a factor in this incident. D2 was the only fatality in this incident. Driver 2 had utilized the passenger restraint system.

Cause of Death

The death certificate states the cause of death as "multiple blunt force injuries sustained in a motor vehicle collision".

Recommendations and Discussions

Recommendation No. 1: Loads in open pickup truck beds should be properly secured before transport commences.

Objects falling from moving vehicles create hazardous driving situations. Witnesses who observed the extension ladder falling from the pickup truck could not differentiate if the pickup truck was personally owned or owned by a contractor. There are several methods of securing ladders during transport. One method is to weigh down the end of the ladder closest to the cab. This helps stabilize the ladder and keeps it from shifting and bouncing. Once the ladder is stabilized, secure the ladder with tie-downs such as ratchet straps or ropes. Another method commonly used by contractors is to employ a ladder rack. Ladder racks are designed to transport ladders and other materials, and attach to the pickup truck. When utilizing a ladder rack, ratchet straps or ropes should be used to further secure the ladder. There are various configurations of ladder racks that allow for use of the truck bed for other items.

Recommendation No. 2: Ladders should be labeled by manufacturers to instruct users on the importance of securing ladders during transport.

The extension ladder involved in this incident was an average, run-of-the mill extension ladder which is available for purchase at any home improvement or hardware store. Observation of ladders at two home improvement stores revealed that none of the ladders bore labels instructing users to secure the ladder during transport. Manufacturers should instruct consumers to secure ladders during transport.

Recommendation No. 3: Retail establishments should locate signage in the ladder area to instruct customers on the importance of load securement.

Retail establishments should instruct consumers on the importance of securing ladders during transport. Instructions can be transmitted by locating signage in the appropriate area. Signage should include how to secure ladders with weight and tie-downs. An explanation of the dangers

of ladders falling from a vehicle should also be included in the signage. A warning label should be applied to the ladder that informs consumers to ensure load securement while transporting.

Recommendation No. 4: Law enforcement should be alert for load securement issues in open bed trucks and issue citations for non-secure transport of ladders.

Under the Federal Motor Carrier Safety Administration's standards, commercial drivers are held legally responsible for load securement. In turn, the motoring public should be made aware of the importance of properly secured loads in the bed of pickup trucks. Kentucky should include load securement in the driver's training and include load securement on the driver's licensing exam.

Recommendation No. 5: Brakes on commercial vehicles should be maintained in proper working order.

According to the police report, the right brake on D1's semi was defective and when applied hard, this defect caused the semi to veer left. Guidance for proper brake alignment and inspections can be found on the Federal Motor Carrier's website, <http://www.fmcsa.dot.gov/rules-regulations/administration/rulemakings/Proposed/Brake-Readjustment-Limits%20-NPRM.aspx>.

Keywords

Guardrail
Semi

References

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4. <http://www.fmcsa.dot.gov/rules-regulations/administration/rulemakings/Proposed/Brake-Readjustment-Limits%20-NPRM.aspx>

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