

Two Tree Trimmers Die When Struck By Errant Semi Tractor-Trailer

Incident Number: 10KY009



Site where semi tractor-trailer struck two tree trimmers. Photo by KY FACE.

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Kentucky Fatality Assessment and Control Evaluation (FACE) Program

Incident Number: 10KY009

Release Date: October 27, 2011

**Subject: Two Tree Trimmers Die When Struck By Errant
Semi Tractor-Trailer**

Summary

One spring morning in 2010, three male tree trimmers set up a work site in a highway intersection at the base of a mountain. As one tree trimmer removed equipment from the truck, two other tree trimmers, 21- and 32-years old, posted signage in the intersection. The two tree trimmers were located on the shoulder of the highway. A semi tractor-trailer was driving down the mountain toward the intersection, when its brakes failed. To avoid hitting vehicles in front of the semi, the driver steered to the left, crossed the intersection, striking both tree trimmers with the semi tractor-trailer. Both tree trimmers died at the scene.

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

Recommendation No. 1: Roadside inspectors should prevent commercial drivers from continuing to operate a semi tractor-trailer when taken out-of-service due to inspection.

Recommendation No. 2: Commercial drivers should inform employers of roadside inspection results.

Recommendation No. 3: Commercial carriers should perform random verification checks of driver motor vehicle records.

Recommendation No. 4: A certified annual commercial vehicle inspection program should be established.

Recommendation No. 5: Employers should require proof that operators have performed daily safety checks on the semi tractor-trailer prior to operation.

The following separate recommendation is being made:

Recommendation No. 6: The toll-free number to report illegal and/ or dangerous commercial driver activity to the Federal Motor Carrier Administration should be advertised in rest areas and truck stops.

Background

Both decedents, (Tree Trimmer, (TT2), - 32 years old, Tree Trimmer 3 (TT3) - 21 years old) worked for a company that cleared vegetation from utility lines along roadways. The employer has numerous locations. Employees received extensive safety training which was documented

for both workers. TT2 had been employed by the company for two years, and TT3 had been employed by the company for approximately eight months.

On the day of the incident, the temperature ranged from 43 degrees Fahrenheit to 45 degrees Fahrenheit.

Investigation

The Kentucky Fatality Assessment and Control Evaluation (KY FACE) program was notified via a government agency of two occupational fatalities involving two tree trimmers. A KY FACE field evaluator conducted a site visit, took photographs, and obtained reports from Kentucky State Police and Kentucky Occupational Safety and Health agencies. Interviews were conducted with a representative of each agency, a commonwealth attorney, and the local sheriff's department.

At approximately 8:00 AM on a spring morning in 2010, a work crew of three male tree trimmers arrived at a work site to trim trees away from utility lines along a state highway. They parked the work truck in a parking lot by an intersection at the bottom of a mountain where a federal highway (HWY 1) intersected with a state highway (HWY 2). HWY 1 ran east and west; HWY 2 ran north and south. Both highways were asphalt, and the pavement wet. A steep grade begins approximately one-half mile on HWY 1 from the intersection with HWY 2.

All three tree trimmers donned safety glasses, reflective vests and hard hats. TT1 began removing tools and equipment from the company truck. Approximately 100 feet away, TT2 and TT3 began the task of setting out traffic demarcation signs along the state highway. They were in the process of performing a job site analysis and placing the traffic signs.

While the tree trimming crew performed their work site analysis, a 46 year-old male tractor trailer driver (owner-operator) was hauling mini-excavators on a flat bed trailer through the mountains. Since the fall of 2009, the driver had leased a flatbed trailer he used to haul machinery.

He had begun his route the day before from a north-western state and had spent the night in the sleeper berth of a 1998 conventional semi tractor trailer parked in a retail store parking lot located several miles from the intersection where the tree trimmers were working. The driver was transporting excavators to a southeastern coastal state and had an interim delivery approximately 25 miles from where he spent the night. The route measured approximately 950 miles from the origination point to the final delivery destination.

Seven of the 10 brakes on the unit did not function correctly, and nine tires out of the 18 were not within the tread allowance set by the Federal Motor Carrier Administration guidelines. His logbook was not up-to-date. There was some confusion regarding the status of his commercial drivers' license. According to roadside inspection reports conducted in several states, his commercial drivers' license had been suspended in three states. However, a month prior to the crash, the leasing company performed a verification of the drivers' CDL and found it to be valid and in good standing.

Upon leaving the parking lot of the store, the semi truck driver headed east on HWY 1. He drove 10 miles over two camel back mountains to HWY 2 where at the base of the second mountain he would turn right. On his way to the intersection, he met two other semi tractor trailer drivers going west. Using a citizens band radio, the driver contacted the other semi drivers headed west and inquired how steep the grades were ahead of him and stated that his brakes had problems. The westbound drivers informed him that the grade on the second mountain was very steep. There were 13 grade-warning signs from the parking lot where the semi driver spent the night and the intersection with HWY 2. A driver of a car behind the eastbound semi driver stated the semi was only traveling 20 miles per hour. As the driver drove the semi drove down the second mountain's one-half mile steep decline toward the intersection with HWY 2, his brakes failed. TT2 and TT3 were placing signage by a guardrail along the state highway on the northeast side of the intersection. There were vehicles in front of the semi to the right so to avoid striking them, the driver steered to the left into the west bound on-ramp headed to the northeast side of the intersection. The driver did not see TT2 and TT3 as he crossed the two lanes of HWY 2. As the semi pushed down the guardrail, the trailer struck TT2 and TT3. Both tree trimmers were thrown to the other side of the guardrail and the semi and trailer went over an embankment and came to rest on its tires. The excavators were ejected from the trailer. Emergency management services and the coroner were contacted. Both TT2 and TT3 were declared dead at the scene.

Results of the driver's blood test for drugs and alcohol were negative. He was charged with two counts of reckless homicide to which he plead guilty. Police found two new tires for the trailer that had not been installed. The driver had purchased the tires and was transporting them to his mechanic for installation.

Cause of Death

The death certificate for TT2 states the cause of death was due to "multiple fractures and internal injuries".

The death certificate for TT3 states the cause of death was due to "multiple fractures and internal injuries".

Recommendations and Discussions

Recommendation No. 1: Roadside inspectors should prevent commercial drivers from continuing to operate a semi tractor-trailer when taken out-of-service due to inspection.

Prior to this incident, the driver of the semi had been cited in seven previous inspections conducted in seven other states for driving on a suspended license, tires with improper tread depths, and faulty brakes. Roadside inspectors should prevent commercial drivers from continuing to operate commercial vehicles on a suspended license, and prevent the operating of a tractor or the use of a trailer when taken out-of-service multiple times. One method that would prohibit the equipment from being used until repairs are made is for the inspector to install a

vehicle immobilizer boot on the tractor and/ or the trailer when the driver and/ or the equipment is put out-of-service at the time of the inspection. This would require the owner of the equipment to remedy the situation before continuing to operate a commercial vehicle, and repair faulty equipment before it is used again.

Recommendation No. 2: Commercial drivers should inform employers of roadside inspection results.

Upon receiving a citation after an inspection, the driver is required by FMCSA regulation 396.9 (Inspection of motor vehicles and intermodal equipment in operation) to give a copy of the citation to their employer or the company they are leased to. Within 15 days of the inspection, the employer/or leasor is required to make the necessary repairs, sign the citation then return the form to the agency issuing the citation, stating repairs had been made. In the six months prior to this incident, the driver had undergone seven inspections in seven states. Each inspection resulted in citations for bad brakes, bald tires, or driving on a suspended license. None of these issues were addressed prior to this incident.

In order to help facilitate carriers being notified of roadside inspections, driver warnings, citations, etc., a subscription service should be established. The service would facilitate immediate notification of the carrier when a driver receives a roadside inspection, warning, or citation. This would assist in keeping carriers informed of adverse situations regarding equipment and drivers.

Recommendation No. 3: Commercial carriers should perform random verification checks of driver motor vehicle records.

At the time this incident occurred, there was some confusion regarding the status of the driver's CDL. According to police records the driver had been operating a commercial motor vehicle on a commercial drivers license which had been suspended in three states. The driver was an owner-operator leased to a company. According to FMCSA regulation §383.33 (Notification of Drivers License Suspension) the driver was obligated to notify his employer/ leasor of the suspensions. CDL drivers who are notified that their CDL has been suspended, revoked, or cancelled are to inform their employer/ leasor by the end of the next business day after receiving the notification. A month prior to the crash, the company as required by FMCSA regulation §391.25 (Annual inquiry and review of driving record) had verified the driver's motor vehicle record and found the license to be in good standing. The driver, when asked by authorities about the suspension, stated that he was unaware his CDL had been suspended. To ensure that company drivers are in compliance with the law, a semiannual random check of each driver's motor vehicle records status should be performed by the company/ leasor.

Recommendation No. 4: A certified annual commercial vehicle inspection program should be established.

When registering a commercial motor vehicle or renewing a commercial motor vehicle, motor carriers should provide proof the registered vehicle is in compliance with the Federal Motor Carrier Administration's standards. Currently, the Federal Motor Carrier standards 396.19

(Inspectors) requires mechanics that perform annual vehicle inspections to have one years experience of inspecting vehicles and have mastery of the tools and procedures involved. Mechanics should have specific training and be certified to perform the annual vehicle inspection.

Recommendation No. 5: Employers should require proof that operators have performed daily safety checks on the semi tractor-trailer prior to operation.

The Federal Motor Carrier Administration, FMCSA regulation 396.9 (Inspection of motor vehicles in operation) requires the driver or a competent person to inspect and complete a Department of Transportation Driver's Vehicle Inspection Report, DVIR, (Attachment) prior to operating equipment. The report should be completed and turned into the carrier's office each day. The report lists important aspects of the tractor and trailer such as air compressor, air lines, battery, body, brakes, tires, clutches, wheels and rims, windshield wipers, etc. There is a section on the form for the driver/ competent person to write notes for items not listed on the report that may need to be addressed immediately or in the future. Long-haul drivers can send the completed form electronically or via United States Postal Service to the company.

After completing the report, the driver/ competent person either signs that the vehicle is in satisfactory condition or that defects need to be corrected before the tractor and/ or trailer is used. Companies with long-haul drivers should have a network of mechanics along delivery routes so drivers have an efficient and reliable safe source to have mechanical repairs made when necessary.

The following separate recommendation is being made:

Recommendation No. 6: To assist the transportation industry police itself, the toll-free number to report illegal and/ or dangerous commercial driver activity to the Federal Motor Carrier Administration should be advertised in rest areas and truck stops.

There is a toll-free number, 1-888-368-7238, for the commercial transportation industry and the public to call and report commercial vehicle violations they observe. Currently, the number can be found on the FMCSA website by clicking on the "Safety and Security" tab, then clicking on "Safety Websites" heading, then clicking on "Report Safety Violations and Household Goods Complaints". This brings up a page with the toll-free number and an opportunity to make the complaint electronically. To make reporting easier, the toll-free number should be displayed at rest stops, truck stops, and on the front page of FMCSA's website.

Keywords

Semi
Flatbed trailer
License suspension

References

Federal Motor Carrier Administration regulation 396.9 Inspection of motor vehicles and intermodal equipment in operation

Federal Motor Carrier Administration regulation 383.33 Notification of drivers license suspension

Federal Motor Carrier Administration regulation 391.25 Annual inquiry and review of driving record

Federal Motor Carrier Administration website: <http://nccdb.fmcsa.dot.gov/HomePage.asp>

Federal Motor Carrier Administration regulation 396.1 – 396.3 Inspection, repair, and maintenance

Federal Motor Carrier Administration regulation 396.19 Inspector qualifications

Acknowledgements

Kentucky State Police

Kentucky Occupational Safety and Health Administration

Federal Motor Carrier Safety Administration

Kentucky Motor Transport Association

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Photograph 1: Federal and state highway intersection where a semi tractor-trailer struck two pedestrian workers. Photograph by KY FACE.



View of intersection coming down the mountain; semi drove to the left

Photograph 2: Incline where brakes failed on semi tractor-trailer



Attachment 1: Copy of Department of Transportations Daily Driver's Vehicle Inspection Report

DRIVER'S VEHICLE INSPECTION REPORT <small>AS REQUIRED BY THE D.O.T. FEDERAL MOTOR CARRIER SAFETY REGULATIONS</small>		
CARRIER: _____		
ADDRESS: _____		
DATE: _____ TIME: _____ A.M. _____ P.M.		
<small>CHECK ANY DEFECTIVE ITEM AND GIVE DETAILS UNDER "REMARKS"</small>		
TRACTOR/ TRUCK NO. _____	ODOMETER READING _____	
<input type="checkbox"/> Air Compressor <input type="checkbox"/> Air Lines <input type="checkbox"/> Battery <input type="checkbox"/> Body <input type="checkbox"/> Brake Accessories <input type="checkbox"/> Brakes, Parking <input type="checkbox"/> Brakes, Service <input type="checkbox"/> Clutch <input type="checkbox"/> Coupling Devices <input type="checkbox"/> Defroster/Heater <input type="checkbox"/> Drive Line <input type="checkbox"/> Engine <input type="checkbox"/> Exhaust <input type="checkbox"/> Fifth Wheel <input type="checkbox"/> Frame and Assembly <input type="checkbox"/> Front Axle <input type="checkbox"/> Fuel Tanks <input type="checkbox"/> Generator	<input type="checkbox"/> Horn <input type="checkbox"/> Lights Head - Stop Tail - Dash Turn Indicators <input type="checkbox"/> Mirrors <input type="checkbox"/> Muffler <input type="checkbox"/> Oil Pressure <input type="checkbox"/> Radiator <input type="checkbox"/> Rear End <input type="checkbox"/> Reflectors <input type="checkbox"/> Safety Equipment Fire Extinguisher Reflective Triangles Flags - Flares - Fusees Spare Bulbs & Fuses Spare Seal Beam	<input type="checkbox"/> Suspension System <input type="checkbox"/> Starter <input type="checkbox"/> Steering <input type="checkbox"/> Tachograph <input type="checkbox"/> Tires <input type="checkbox"/> Tire Chains <input type="checkbox"/> Transmission <input type="checkbox"/> Wheels and Rims <input type="checkbox"/> Windows <input type="checkbox"/> Windshield Wipers <input type="checkbox"/> Other
TRAILER(S) NO.(S) _____		
<input type="checkbox"/> Brake Connections <input type="checkbox"/> Brakes <input type="checkbox"/> Coupling Devices <input type="checkbox"/> Coupling (King) Pin <input type="checkbox"/> Doors	<input type="checkbox"/> Hitch <input type="checkbox"/> Landing Gear <input type="checkbox"/> Lights - All <input type="checkbox"/> Roof <input type="checkbox"/> Suspension System	<input type="checkbox"/> Tarpaulin <input type="checkbox"/> Tires <input type="checkbox"/> Wheels and Rims <input type="checkbox"/> Other
Remarks: _____		

<input type="checkbox"/> CONDITION OF THE ABOVE VEHICLE IS SATISFACTORY		
DRIVER'S SIGNATURE: _____		
<input type="checkbox"/> ABOVE DEFECTS CORRECTED <input type="checkbox"/> ABOVE DEFECTS NEED NOT BE CORRECTED FOR SAFE OPERATION OF VEHICLE		
MECHANIC'S SIGNATURE: _____ DATE _____		
DRIVER'S SIGNATURE: _____ DATE _____		
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