

Kentucky Fatality Assessment and Control Evaluation (FACE) Program

Incident Number: 08KY029

Release Date: May 29, 2009

Subject: Driver of a Semi-Tractor Pulling Twin Trailers Fatally Injured in Single Vehicle Crash

This is a summary. The entire report is available online at: www.kiprc.uky.edu and follow the tabs: Programs - Occupational Injuries & Illnesses - Worker Fatalities - Motor Vehicle - Case Number: 08KY029

Summary

In the spring of 2008, a 40-year-old tractor-trailer driver died after his vehicle left the interstate highway, crashed, and was engulfed in flames. The tractor drifted over the fog line and rumble strip onto the right shoulder, began to skid and left the highway. The tractor slid through the grass beside the roadway, struck a concrete culvert, sideswiped a small tree and then hit a large tree head-on. The tractor and trailers then skidded back down the embankment toward the highway where the entire unit came to rest. The tractor and lead trailer overturned onto the driver's side. The second (rear) trailer uncoupled from the first trailer but remained upright and attached by safety chains. Emergency medical services were contacted. Upon arrival, EMS found the entire unit engulfed in flames. The coroner was contacted, and upon his arrival, declared the driver dead at the scene.

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

Recommendation No. 1: Semi tractor-trailer drivers should be trained to recognize signs of fatigue and when to seek appropriate rest areas.

Fatigue is one of the main occupational hazards commercial drivers face. Commercial drivers should be educated to recognize signs of fatigue while driving. According to an article, "Driver Fatigue: The Dangers of Driving Sleepy", signs of driver fatigue include daydreaming, straying out of the lane, excessive yawning, feeling impatient and/or stiff, heavy eyes, and reacting slowly. Methods to avoid driver fatigue include being well rested, getting enough sleep, taking breaks every two hours where the driver may take a nap, eating a snack, avoiding consumption of alcohol, having a driving plan, and staying hydrated. Companies should assist drivers in fighting fatigue by establishing policies requiring drivers to stop every 100 miles driven or every two hours driven for a rest break. When hauling hazardous materials, company policy should require rest breaks more frequently. Also to help fight fatigue, companies should consider varying drivers' routes to keep drivers from becoming inured to routine.

Every driver should have a route plan that incorporates appropriate rest areas to give the driver access to meals, a safe quiet place to nap, and to be able to stretch or walk to stimulate circulation. In case a driver becomes fatigued while driving, companies should provide drivers with maps with designated rest areas for semi truck drivers along the route. The plan should also provide information on roadside assistance if needed.

Recommendation No. 2: Companies should provide new and refresher commercial driver safety training for company drivers addressing driver distraction and including defensive driving techniques.

Company truck drivers should receive new and refresher commercial driver training semi-annually. This training should include defensive driving techniques and highway incident management strategies. Training should also include education on the prevention of jackknife, roll-overs and the causes of such occurrences. According to two truck driver training schools, defensive driving techniques should include looking eight to ten seconds ahead of the truck and how to deal with obstacles in the roadway (05KY089). Training should also include aids to help drivers stay focused on driving and not become distracted. Companies should provide refresher training for all drivers every six months to address driving habits including appropriate speed for driving conditions, wearing safety belts, space management, and how to avoid becoming distracted while driving and fatigue.

Recommendation No. 3: Vehicle stabilizer and sensory systems should be mandatory equipment on all commercial vehicles.

The Federal Motor Carrier Safety Administration's Code of Federal Regulations, 393.55 requires commercial vehicles manufactured after 1999 to be equipped with automatic braking systems (ABS). The semi-tractor trailer involved in this incident had been manufactured in 2003 and was equipped with an ABS, but not a stabilizer system. When ABS is applied by the driver prior to striking or making an avoidance maneuver, the electronic stability program when coupled with ABS helps prevent the semi-tractor trailer from jackknifing. If the ABS is not activated quickly enough, the electronic stability program can sense incorrect vehicle movement. Independent of driver input or action, the electronic stability program will override the driver, engage, and prevent the semi-tractor trailer from jackknifing or rolling-over.

Another system available for trucks is a sensory system which uses forward and side-sensing radar to inform the driver that he/she is too close to the vehicle in front of them or to their immediate side. Two indicators, a light on the dash board and an audio signal, will alert the driver of close proximity to the vehicle in front or side and will automatically slow the truck down thus expanding the driver's reaction time.

Recommendation No. 4: Log books and other important driver records should be stored in a fireproof container in the cab.

Semi-tractor trailer drivers are required to have a log book in their possession while operating a semi. If hauling hazardous materials, the Federal Motor Carrier Safety Administration's Code of Federal Regulations, Subpart A, 177.816(e)(2)(i) Shipping papers, requires the driver to keep the shipping documents within reach of the driver's door. These documents should be kept safe in case of emergencies such as fire or damage. A fire-proof document storage container should be attached to the cab floor or door to contain the driver's log and other important documents.

The Kentucky Fatality Assessment & Control Evaluation Program (FACE) is funded by a grant from the Centers for Disease Control and the National Institute of Safety and Health. The purpose of FACE is to aid in the research and prevention of occupational fatalities by evaluating events leading to, during, and after a work related fatality. Recommendations are made to help employers and employees to have a safer work environment. For more information about FACE and KIPRC, please visit our website at: www.kiprc.uky.edu