

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

REPORT#: 20KY040

REPORT DATE: 1-21-2021

INCIDENT HIGHLIGHTS



DATE:

September 22, 2020



TIME:

07:15 PM



VICTIM:

Age: 52

Sex: Male

Occupation: Commercial
Driver



INDUSTRY/NAICS CODE:

484110



EMPLOYER:

Interstate Commercial
Carrier



SAFETY & TRAINING:

Driver Orientation Training



SCENE:

Customer Location



LOCATION:

Kentucky

EVENT TYPE:

Motor Vehicle Crash



Truck Driver Killed After Vehicle Rollaway

SUMMARY

On Tuesday, September 22, 2020, a 52-year-old male commercial truck driver exited his vehicle to remove debris from his customer's parking spot. After exiting the vehicle, the tractor-trailer began to roll away. The rolling vehicle struck the driver, rolled over his body and came to final rest on top of the victim.

[READ THE FULL REPORT>](#) (p.5)

CONTRIBUTING FACTORS

Key contributing factors identified in this investigation include:

- Failure to set parking brake prior to exiting the vehicle
- Parking on a sloping surface

[LEARN MORE>](#) (p.6)

RECOMMENDATIONS

Kentucky FACE investigators concluded that, to help prevent similar occurrences, employers should:

- Commercial carriers should implement a rollaway prevention procedure
- Commercial carriers should equip company trucks with rollaway prevention technology.
- Administrative controls such as warning signs should be implemented to remind drivers to set brakes.

[LEARN MORE>](#) (p.7)

<http://www.mc.uky.edu.kiprc/FACE/index.html>



Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839



Fatality Assessment and Control Evaluation (FACE) Program

This case report was developed to draw the attention of employers and employees to a serious safety hazard and is based on preliminary data only. This publication does not represent final determinations regarding the nature of the incident, cause of the injury, or fault of employer, employee, or any party involved.

This Case report was developed by the Kentucky Fatality Assessment and Control Evaluation (FACE) Program. Kentucky FACE is a NIOSH-funded occupational fatality surveillance program with the goal of preventing fatal work injuries by studying the worker, the work environment, and the role of management, engineering, and behavioral changes in preventing future injuries. The FACE program is located in the Kentucky Injury Prevention and Research Center (KIPRC). KIPRC is a bona fide agent for the Kentucky Department for Public Health.

Email: Kyfaceprogram@uky.edu

Twitter: <http://twitter.com/KYFACEProgram>

Facebook: <https://www.facebook.com/Kyfaceprogram/>

Website: <http://www.mc.uky.edu/kiprc/face/index.html>



Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

INTRODUCTION

On Tuesday, September 22, 2020, a commercial truck driver (victim) finished loading recycled plastic into his trailer, obtained a scale ticket, and proceeded to park in the plastic recycling facility's parking lot. After a parking spot was located, the driver observed debris located near the front passenger's side tire. The driver exited the vehicle and walked in front of the truck, toward the passenger's side. While doing so, the truck began to roll forward without the victim's knowledge. As the victim bent over to pick up the debris, the advancing truck struck him in the back and knocked him to the ground. As the victim lay on the ground, he was unable to move out of the truck's path, and the vehicle rolled on top of him.

EMPLOYERS

The employer is an interstate commercial carrier who operates 20 tractor-trailers and employs 20 commercial drivers. According to the Federal Motor Carrier Safety Administration (FMCSA), the company travels approximately 2,000,000 miles annually and transports general freight, building materials, and metal products (FMCSA, 2020).

WRITTEN SAFETY PROGRAMS and TRAINING

A company representative stated that the company has a well-established driver orientation-training program for new incoming drivers. In addition to requiring a minimum of two years prior commercial driving experience, the representative stated all new drivers must complete a road test to have his or her driving skills evaluated. Upon successful completion of the road test, drivers are then required to complete training on hours of service regulations, commercial vehicle inspection procedure and load securement. A new driver must successfully complete all required training prior to performing work for the company. No evaluation period, post-orientation, is currently required. In addition to the initial training, the representative stated that drivers must complete refresher training once annually. The company also recently implemented an online, virtual driver training platform. However, the rep stated that the victim had not yet had the opportunity to utilize the new training platform prior to the incident occurring.

WORKER INFORMATION

The victim was a married, 52-year-old white male with children. He had driven commercially for approximately six years, three of which were with the involved employer. The victim had a high school education.

INCIDENT SCENE

The incident occurred in a parking lot, near a manufacturer's facility. The victim had just finished loading freight from the business and had obtained a weight ticket from their on-site scale. The facility had just closed for the evening and the driver was attempting to park his vehicle overnight. The parking lot is generally level; however, the spot in which the driver chose to park had a descending grade of approximately 6%.

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839



Photo 1. Picture of area where truck parked. Photo property of Kentucky FACE.



Photo 2. Picture depicting point of contact between the front of the involved truck and the victim. Photo property of Kentucky FACE.

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839



Photo 3. Picture depicting location of front steer axle tires at final rest. Photo property of Kentucky FACE.



Photo 4. Picture depicting location of rear axle trailer tires at final rest. Photo property of Kentucky FACE.

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

WEATHER

The temperature was approximately 69°F at the time of the incident. The humidity was 57% with a west wind at 7 mph. There was no precipitation. Weather was not determined to be a factor in the accident (Weather underground, 2020).

INVESTIGATION

On September 22, 2020, the victim departed his out-of-state business at 8:00 am, loaded with general freight, en route to a customer's facility located in Kentucky. According to the company, this particular trip was a dedicated route for the victim that he completed multiple times weekly. The distance from the driver's business to the customer's facility is approximately 450 miles. After the load is delivered to this facility, the company attempts to find additional back-haul deliveries for the driver to complete to prevent un-laden miles. On the day the incident occurred, the victim was given the directive to make an additional pickup and delivery within the state of Kentucky. The total mileage of this trip was approximately 95 miles. The victim completed the trip successfully, unloaded, and was loading again for a return trip back home the next day. After loading was complete, the driver utilized the weight scale at the customer's facility to verify compliance. According to the weight ticket found in the cab of the truck, the total weight of the 2016 Peterbilt 579 truck, 2016 Vanguard trailer and commodity was 77,000 lbs. By this point, the customer had closed for the evening and the driver proceeded to locate a parking spot to stay the night. According to the company, who viewed the incident via a window mounted dash camera, after selecting a parking spot in a lot near the customer's facility, the driver observed debris situated near the front passenger's side tire. The victim exited the truck, leaving the driver's side door open and walked towards the passenger's side of the vehicle, in front of the truck. As he did, the truck began rolling forward, toward the victim. As the driver approached the passenger's side, he knelt over with his back towards the truck to remove the debris. The truck proceeded forward and struck the driver in the back. The force of the impact knocked the victim to the ground. As the victim lay on the ground, he realized what was happening and attempted to roll out of the path of the truck, to his left but was unable to do so quickly enough. The truck continued forward and rolled on top of the victim, pinning him beneath the front passenger's side steer-axle tire. The truck came to final rest approximately six feet from where it initially began rolling, on top of the victim. The victim was not located until the next day, September 23, 2020 at 6:30 AM, when a facility manager noticed the victim's truck door ajar and proceeded to investigate. After approaching the vehicle, the manager observed the vehicle on top of the victim and contacted emergency services. The victim was pronounced deceased by emergency services upon their arrival.

CAUSE OF DEATH

According to the death certificate, the cause of death was compressional/blunt force trauma "crush" truncal injuries.

CONTRIBUTING FACTORS

Occupational injuries and fatalities are often the result of one or more contributing factors or key events in a larger sequence of events that ultimately result in the injury or fatality. Kentucky FACE investigators identified the following unrecognized hazards as key contributing factors in this incident:

- Failure to set parking brake prior to exiting the vehicle
- Parking on an uneven surface

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Commercial carriers should implement a rollaway prevention procedure.

Discussion: Commercial truck drivers enter and exit the cab of their trucks multiple times daily to perform routine tasks. Unlike a standard passenger vehicle, most commercial trucks are equipped with pneumatic braking systems. A pneumatic brake system requires the driver to physical activate and deactivate the parking brakes. The victim was driving a combination vehicle which consisted of a truck and semi-trailer. This configuration of vehicle has two parking brakes - one for the truck and one for the semi-trailer. During the investigation, investigators discovered that both the truck and semi-trailer brakes were in the “released” position. This led investigators to determine that the driver failed to engage the brakes prior to exiting the cab, which ultimately resulted in the vehicle rolling forward. According to a survey conducted by Frost & Sullivan, 60% of fleets admitted to having a vehicle rollaway event at their company (Frost & Sullivan, 2020.) The most common reason vehicle rollaway collisions occur is human error - drivers simply forget to set the parking brakes. One of the most effective ways to prevent this potentially fatal error from occurring is the development of a rollaway prevention standard operating procedure. Although the task of setting the parking brake is simple, drivers typically enter and exit the truck multiple times a day which increases the probability of an error occurring. Simple routines can be implemented to help combat driver oversight. A standard operating procedure should include the following elements:

- Parking spot selection – When possible, drivers should select a parking spot that is level.
- Turn off the ignition
- Set truck parking brake and trailer parking brake
- Check mirrors
- Verify truck and trailer parking brakes are set
- Pause before exiting, observe for movement prior to exiting
- Exit truck and deploy wheel chocks

Once a procedure is established, all drivers should receive extensive training on the procedure to ensure a routine is developed. The driver should be observed in a practical setting to verify he or she has adopted the routine and is utilizing it correctly.



Photo 5. Picture depicting typical wheel chock configuration (Bing Image, 2020)

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

Recommendation #2: Commercial carriers should equip company trucks with rollaway prevention technology

Discussion: Rollaway prevention technology exists to help drivers combat the dangers associated with failing to set the brakes. This technology works through a system of interlocks that are installed in critical areas, such as the seat, seat belt or cab door, and works by automatically engaging the parking brakes if the driver opens the door or exits the seat without doing so.

Heavy truck manufacturers are also offering add-on equipment features to notifying the driver if he or she fails to set the parking brakes before opening the door. Rather than applying the brakes for the driver, this system honks the horn if the driver opens the door without setting the brake. This audible tone would alert the driver immediately, drawing his attention to the fact he failed to set the brakes. Commercial carriers should equip company trucks with rollaway prevention technology to help prevent rollaway collisions from occurring.

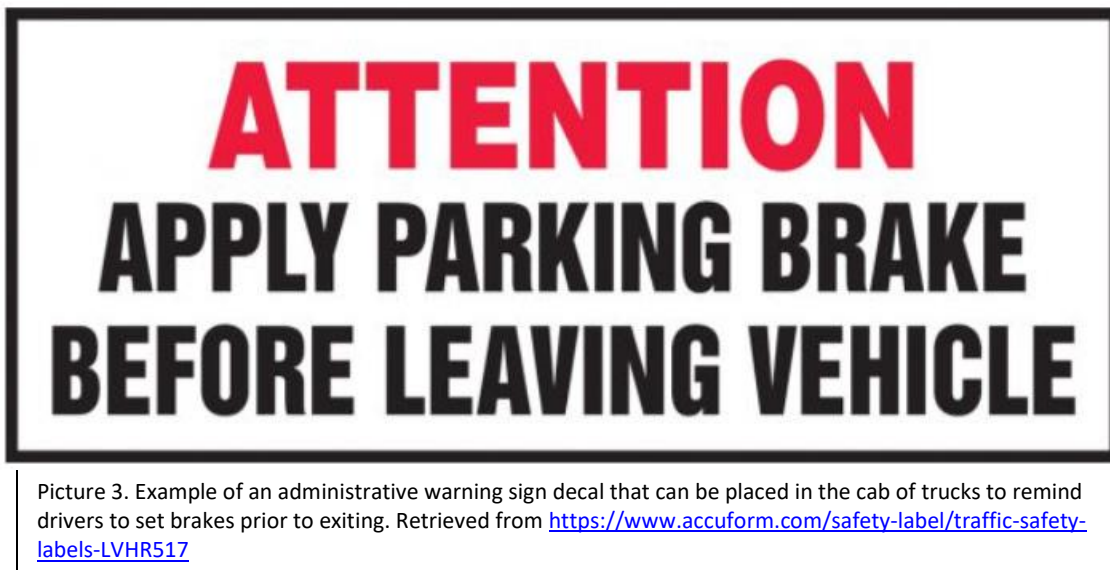


Picture 2. Picture of Bendix Intellipark LED brake interface. Retrieved from <https://www.oemoffhighway.com/drivetrains/brake-system/press-release/21060126/bendix-commercial-vehicle-systems-llc-bendix-pilot-testing-intellipark-electronic-parking-brake-with-fleets>

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

Recommendation #3: Administrative controls, such as warning signs should be implemented to remind drivers to set brakes.

Discussion: Administrative controls, such as warning signs and postings can be an effective addition to any safety program by providing a visual reminder of a previously established policy or procedure. Administration controls, although 4th in the hierarchy of hazard controls, can further establish the desired muscle memory and application of a procedure. In this case, the victim exited the truck without first setting the parking brake. Commercial carriers should implement warning signs into the cab of their trucks to help remind drivers to set the parking brakes prior to exiting the vehicle. The warning signs should be in a clearly visible location, contrasting colors, easy to read and specific to the desired behavior.



PROGRAM FUNDING

The Kentucky Fatality Assessment & Control Evaluation Program (FACE) is funded by grant 5U6o0H008483-15 from the National Institute for Occupational Safety and Health (NIOSH).

REFERENCES

Federal Motor Carriers Safety Administration. Retrieved September 7, 2020 from <https://safer.fmcsa.dot.gov/query>

Historical Weather Data. Retrieved September 7, 2020 from <https://www.wunderground.com/history/daily/KPAH/date/2020-8-18>

Wheel Chock Photo. Retrieved October 12, 2020 from https://www.discounttramps.com/images/xxl/DH-PWC-1-2_1.jpg



Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

Vehicle Rollaway Statistics. Retrieved October 12, 2020 from <https://www.trucknews.com/health-safety/bendixs-electronic-parking-brakes-look-to-eliminate-rollaways/1003087471/>

Rollaway Technology. https://www.bendix.com/en/products/intellipark/intellipark_1.jsp

INVESTIGATOR INFORMATION

This investigation was conducted by Beau Mosley, Fatality Investigator, Fatality Assessment and Control Evaluation, Kentucky Injury Prevention and Research Center, University of Kentucky, College of Public Health.

ACKNOWLEDGEMENTS

The Kentucky FACE Program would like to thank the involved company for their assistance with completion of this report.

SURVEY

[Please click here](#) to take a brief, anonymous survey concerning this report. We appreciate any feedback you may have.