

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

INCIDENT HIGHLIGHTS



DATE:
September 5, 2022



TIME:
12:34 p.m.



VICTIM:
49-year-old driver



INDUSTRY/NAICS CODE:
Farm Supplies Merchant
Wholesalers /424910



EMPLOYER:
Farming services



SAFETY & TRAINING:
Few elements existed

SCENE:
State highway



LOCATION:
Kentucky



EVENT TYPE:
Struck by



REPORT#: 22KY070

REPORT DATE: January 26, 2024

Farm Services Driver Killed in Highway Crash—Kentucky

SUMMARY

At 12:34 p.m., September 5, 2022, a 49-year-old farm services employee was killed when the light-duty pickup truck he was driving was struck by another vehicle. The driver was following his co-worker, who was driving a much larger truck. The larger truck became inoperable and had to stop in the right lane of the highway. The pickup truck was positioned behind the larger truck when it was struck from the rear.

... [READ THE FULL REPORT](#)> (p.3)

CONTRIBUTING FACTORS

Key contributing factors identified in this investigation include:

- Vehicle position
- Lack of safe work procedures
- Need for emergency warning devices
- Noncommercial operator licensing
- Lack of seatbelt use
- Workplace substance use

...[LEARN MORE](#)> (p.9)

RECOMMENDATIONS

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

- Ensure that drivers position vehicles so as to shield them from oncoming traffic,
- Develop and implement written safe work procedures for drivers,
- Provide and require the use of portable emergency warning devices when vehicles become stranded in the roadway or are stopped on the shoulder.

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KENTUCKY

State **FACE** Program

Fatality Assessment & Control Evaluation

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Fatality Assessment and Control Evaluation 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 National Institute for Occupational Safety and Health-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.

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INTRODUCTION

At 12:34 p.m., September 5, 2022, a 49-year-old driver working for a farm services employer was killed on a rural highway when the light-duty pickup truck he was driving was struck by an approaching vehicle. The driver was following a much larger truck driven by his co-worker. The two vehicles were traveling on a two-lane divided highway when the larger truck experienced mechanical problems and could not continue. It came to a stop in the right lane and the deceased employee positioned his light-duty pickup truck behind it. The light-duty truck was struck from the rear by a third vehicle traveling on the roadway. The impact pushed the light-duty pickup truck into the larger truck, killing the driver of the light-duty pickup.

EMPLOYER

The farm services employer was engaged in agricultural operations that included farming, farm equipment and supplies sales, and the delivery of farm supplies. The employer had been in business for approximately 14 years and had seven employees.

WRITTEN SAFETY PROGRAMS and TRAINING

The farm services employer did not have a written safety program or provide driver safety training for employees of the organization. The driver employees involved in this incident were required to have only noncommercial driver licenses, also referred to as Class D licenses. Commercial (Class B) licensure is not required for agricultural operations under Kentucky law. In obtaining the Class D license, the employees were required to pass basic written and performance tests for highway vehicle use.

WORKER INFORMATION

The deceased driver was a 49-year-old white male. He had been working approximately two years for the farm services employer. The other driver was a 45-year-old white male who had worked for the farm services employer for approximately one year before the incident. A third individual involved in the incident was a private citizen.

EQUIPMENT

Three vehicles were involved in this fatal incident:

1. A large truck, which was a commercial model (1997, Ford LN series) used for agricultural deliveries and which belonged to the farm services employer. The Ford LN is reported by the National Highway Traffic Safety Administration [[NHTSA, 2023](#)] as having a Gross Vehicle Weight Rating at Class 8: 33,001 lbs. and above.
2. A light-duty pickup truck (1996, Nissan Standard Body), which was driven by the deceased employee. This vehicle also belonged to the farm services employer.
3. A privately owned pickup truck (2016, Ford F-350 series) that was pulling a flat-bed trailer filled with personal items.

Seatbelts were not worn by the deceased employee or his co-worker. The driver of the Ford F-350 pickup truck was wearing a seatbelt.

INCIDENT SCENE

The scene was a stretch of four-lane, limited access state-maintained highway traversing a rural county with a posted speed limit of 70 mph. The crash occurred approximately one mile from the on-ramp that the two farm services trucks

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used to enter onto the highway. The scene is shown in Photo 1. A blue arrow indicates the approximate point of contact of the crash.



Photo 1. Incident Scene (Property of KYFACE)

WEATHER

The weather at the time of the incident was approximately 80 degrees Fahrenheit, with winds at 1.8 mph, gusts at 2.5 mph from East Southeast, and no precipitation [[Weather Underground, 2023](#)]. Weather is not considered to have played a part in the incident.

INVESTIGATION

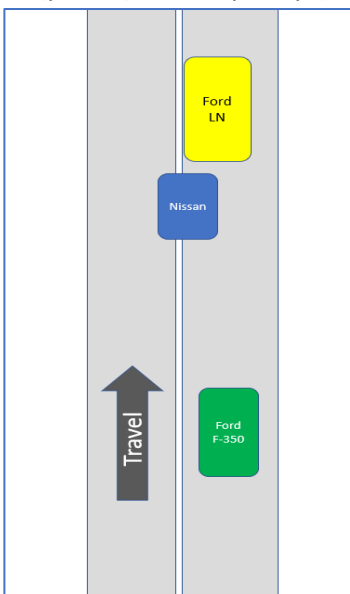
The two farm services vehicles were involved in making a delivery when the larger Ford LN truck began to experience mechanical problems that were reported by the driver to the employer as symptoms consistent with a lack of fuel, even though the truck's fuel gage did not indicate an empty gas tank. As a result, the Ford LN could no longer continue, requiring it to stop in the right (slow) lane of the highway. The smaller Nissan pickup truck had been following the larger truck and was positioned behind it in the right lane. Both vehicles were using their emergency warning lights (e.g., flashing hazard lights) at the time. The Nissan pickup truck was positioned in the roadway behind the larger truck when it was struck from the rear by the oncoming Ford F-350. Photo 2 shows the position of the three vehicles following the crash. The impact pushed the Ford LN truck onto the shoulder.

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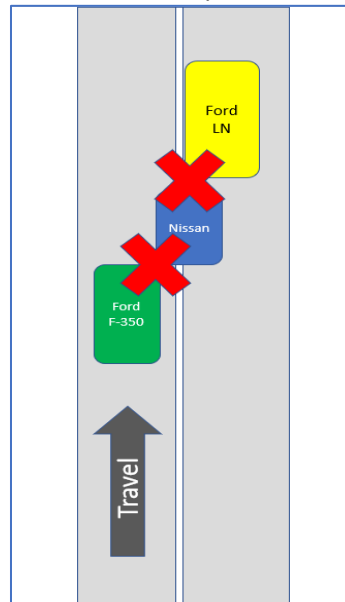


Photo 2. Incident Scene (Courtesy of Heritage Media of Kentucky, Inc.)

Just prior to the crash, the Ford F-350 was traveling westbound on the highway. The approximate locations of the Ford LN (yellow), Nissan pickup (blue), and Ford F-350 (green) prior to the crash are represented in Graphic 1.



Graphic 1. (Property of KYFACE)



Graphic 2. (Property of KYFACE)

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Upon approaching the scene, the Ford F-350 was traveling in the right lane. As it neared the two stopped farm services trucks, the Ford F-350 (green) was not able to avoid the Nissan pickup truck (blue) and it crashed into the Nissan pickup truck from the rear, pushing it into the Ford LN (yellow). The points of impact are depicted with red Xs in Graphic 2. The driver of the Nissan pickup was killed, while the other drivers were uninjured. The speed of the Ford F-350 at the time of the crash was not classified as excessive, according to the police accident report. Post-incident drug screens of the drivers who survived the crash indicated the presence of methamphetamine for the larger truck driver and delta-9 THC for the driver of the third vehicle.

CAUSE OF DEATH

The cause of death determined by the coroner was blunt force trauma.

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 has identified the following unrecognized hazards as key contributing factors in this incident:

- Vehicle position
- Safe work procedures
- Driver inattention/slowed reaction time
- Noncommercial operator licensing
- Lack of seatbelt use
- Workplace substance use

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Employers should ensure that drivers position vehicles so as to shield them from oncoming traffic.

Discussion: Drivers are at risk of collision when their vehicles experience mechanical problems and must drive at speeds substantially slower than other traffic or when they must come to a stop in the roadway. Safe work procedures that direct drivers to take defensive actions when they encounter these situations can mitigate this hazard. The appropriate safe work procedures utilized by employees may vary significantly depending on driving conditions (e.g., traffic, weather, roadway).

When possible, vehicles that are stopped or stranded should be located so that they are shielded from traffic. In this case, the smaller Nissan truck should have been positioned in front of the larger Ford LN, which would have shielded the smaller truck with the larger truck from impact. Although the Ford LN truck involved in this incident could not be driven to the shoulder, in cases when a vehicle experiencing mechanical problems can be driven onto the shoulder, the Kentucky Driver's Manual ([KDM, 2021](#)) directs drivers to activate their vehicle's emergency warning lights (which the Ford LN and Nissan drivers had done) and park their vehicle on the shoulder as far to the right as possible.

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Recommendation #2: Employers should develop and implement written safe work procedures for drivers.

Discussion: Safe work procedures are needed to protect drivers from a variety of potential hazards posed by vehicle operations.

In cases where a vehicle has stopped in the roadway and cannot be moved to the shoulder, as in this fatal incident, the risk of the stopped vehicle being struck by oncoming traffic is elevated, rendering it unsafe for the driver and any passengers to remain in the stopped vehicle. Likewise, should the driver exit a stopped vehicle, they are likely to be exposed to traffic without the relative protection of their vehicle. If the driver can exit their vehicle safely and if there is a location available that could afford protection from approaching traffic (e.g., behind a guardrail or distanced on an adjacent hillside), then the driver should exit the vehicle and go to the safer location. If an oncoming vehicle were to strike a disabled vehicle, the impact could push the vehicle and produce flying debris in the downstream direction of traffic flow. Therefore, a driver who has exited a stopped vehicle should move to a position behind the vehicle (in the upstream direction of traffic flow) to minimize such risk. Employers should develop and implement safe work procedures for employees that allow for variations in driving conditions and the use of driver judgment relative to decision making and their choice of the specific defensive actions taken to protect themselves from collisions.

When entering areas where exposure to traffic exists, drivers should don high-visibility garments. The National Institute of Justice [2010] noted that drivers may not see workers, especially in low-light conditions and/or when they are distracted by emergency warning lights. High-visibility garments such as vests with retro-reflective striping significantly increase the chances of workers being seen by oncoming drivers.

To meet minimum requirements for high-visibility apparel, drivers should use vests that meet the Class II requirement of American National Standards Institute/International Safety Equipment Association (ANSI/ISEA) 107-2020 [ANSI, 2020] or ANSI/ISEA 207-2011 for Public Safety Vests [ANSI, 2011] which include:

- Fluorescent background material,
 - Fluorescent material may be yellow-green, orange-red, or red, and
- Retro-reflective material arranged for 360-degree visibility.

Because magnesium-based road flares can pose both safety and environmental hazards, these are not recommended for use. Research [Mesloh et al., 2008] funded by the U.S. Department of Justice into alternative devices has indicated that if chemical and electrical flares are elevated to 36 inches above the ground (e.g., on top of a highway cone), then the flares were visible to oncoming motorists from a distance of 1 mile. Employees should never place, retrieve, or adjust portable emergency warning devices without watching for oncoming traffic.

Recommendation #3: Employers should provide and require the use of portable emergency warning devices when vehicles become stranded in the roadway or are stopped on the shoulder.

Discussion: This fatal incident may have resulted in part due to inattention and/or slowed reaction time on the part of the driver of the Ford F-350. The use of portable emergency warning devices beyond the Nissan's and Ford LN's emergency flasher lights may have provided enough advanced visual indication of the stranded Ford LN to alert the Ford F-350's driver to avoid collision. Commercial trucks are required to carry portable warning devices for stopped vehicles under 49 CFR part 393.95(f) [National Archives, 2023], but the two farm service trucks involved in this incident did not

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utilize them. It is not known if they were or were not available for use in this incident. Employers should provide and direct their drivers to use portable emergency warning devices should their vehicles become disabled on an active roadway. Portable warning devices such as reflective cones, flashing triangles, and roadside flares can effectively warn approaching motorists of a stopped vehicle ahead and provide time for traffic to slow down and move over.

Recommendation #4: Lawmakers should revise applicable laws to require drivers working for agricultural operations who operate on public roadways to obtain commercial driver licenses (CDLs).

Discussion: Additional training may have helped prevent this incident. The two farm services drivers had completed only the most basic level of driver safety training; that necessary to obtain a Kentucky Operator's License [[KDM, 2021](#)], also referred to as a Class D license. In most instances, drivers who operate a straight truck with two or more axles and a gross vehicle weight rating of 26,001 pounds or more, such as the Ford LN truck involved in this fatal incident, are required to first obtain a Class B CDL license [[Drive.Ky.Gov, 2023](#)].

However, an exemption from this requirement currently exists for drivers of vehicles used to "transport either agricultural products, farm machinery, farm supplies, or both to or from a farm" under federal law at 49 CFR part 383(d)(1)(ii) [[ATA, 2022](#)] and under state statutes under KRS 281A.050 [[Legislative Research Commission, 2007](#)]. Revision of this exemption could require that the drivers of larger vehicles that operate on public roadways, like the Ford LN truck involved in this incident, complete the driver safety training necessary to obtain a CDL.

The Federal Motor Carrier Safety Administration's (FMCSA's) training requirements for CDLs include a detailed curriculum with instruction in theory and behind-the-wheel training with a demonstration of proficiency. This training would include instruction on topics applicable to this incident such as: moving on-road vehicles off the road so as to avoid subsequent crashes or injuries; engaging flashers; and placing reflective triangles and other warning devices for stopped vehicles [[FMCSA, 2016](#)]. The additional training required for CDL licensure could have helped the farm services drivers recognize the safety hazard created by their stopped vehicles and oncoming traffic and take appropriate actions such as those discussed in the recommendations above.

Recommendation #5: Employers should develop and implement a seatbelt policy for drivers.

Discussion: The employee who was killed in this incident was not wearing a seatbelt when his Nissan pickup truck was struck by an approaching vehicle. Seatbelts are an essential form of safety equipment for persons driving or riding in motor vehicles. The National Highway Traffic Safety Administration [[NHTSA, n.d.](#)] reports that the risk of a fatal injury in a crash is cut in half when a seatbelt is used. In most cases, motor vehicle operators in Kentucky are required to wear a seatbelt [[KRS, 2016](#)]. An essential function of a seatbelt is to distribute crash forces across stronger parts of the user's body and keep them from being ejected from the vehicle [[Insurance Institute for Highway Safety, n.d.](#)]. Employers should develop and implement a policy that requires their drivers to use a seatbelt to help minimize the hazards associated with motor vehicle use.

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Recommendation #6: Employers should develop and implement recovery-friendly policies and offer information, screenings, resources, and referrals for workers at risk for substance use disorders.

The driver of the Ford LN truck was found from a post-accident blood test to have methamphetamine in his bloodstream. Use of methamphetamines is recognized as producing several serious health effects, including anxiety, confusion, and insomnia [[Substance Abuse and Mental Health Services Administration, 2022](#)] which may have influenced the effectiveness of the driver's decision-making during the course of the truck's mechanical problems and subsequent breakdown in the roadway. To address the potential workplace hazards presented by employee substance use disorders, employers should implement a Workplace Supported Recovery Program (WSRP) using evidence-based policies and programs to reduce multiple risk factors for substance use. As described by the National Institute for Occupational Safety and Health (NIOSH), a WSRP can be valuable in preventing and responding to substance abuse problems in the workplace [[2023](#)].

A WSRP can:

- Prevent work-related injuries and illnesses that could lead to the initiation of substance misuse,
- Decrease difficult working conditions or work demands that might lead to daily or recurrent pain,
- Promote the use of alternatives to opioids for pain management associated with a workplace injury or illness,
- Provide information and access to care for a substance use disorder when it is needed, including access to medication-based or medication-assisted treatment, together with individual counseling,
- Support second-chance employment,
- Provide workplace accommodations and other return-to-work assistance,
- Provide peer support and peer coaching to bolster the social supports available to workers in recovery, and
- Promote a work culture and climate that is supportive of workers in recovery (for example, awareness building, stigma reduction, and alcohol-free and health-focused work social events).

DISCLAIMER

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INVESTIGATOR INFORMATION

This investigation was conducted and report prepared by Dr. David Stumbo, OHST, CSP.

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