

Salesman Strikes Backhoe with Pickup in Wyoming

SUMMARY

A 57 year old male drilling bit salesman died from injuries received when the company pickup he was driving struck the rear of a backhoe while rounding a curve at the hill crest of a two lane highway. On impact, the pickup frame buckled in the middle and the passenger compartment ignited, burning the pickup cab with the victim trapped inside.

Employers may be able to minimize the potential for occurrence of this type of incident through the following precautions:

- **Provide driving hazard awareness training to all road salespeople**
- **Insure vehicle condition through periodic inspections**

INTRODUCTION

In the early afternoon of Friday, April 30, 1993, a company pickup driven by a salesman for a drilling bit service was south-bound on a two lane primary roadway, approaching a gentle curve at a hillcrest. The curve was on a minor grade prior to the crest of the hill. The weather was clear, the road was dry, and visibility was unobstructed for a half mile in each direction. As he entered the curve, the pickup driver came up behind a farm tractor on which a backhoe had been mounted.

The backhoe was attached to a farm tractor being driven by an employee of a nearby youth correction facility. It was owned by the institution and was not registered for on-road transportation. That vehicle was traveling at approximately nine miles per hour, and was in the south-bound lane of travel. There was a light and signal violation noted, as well as a violation for not displaying the "slow-moving vehicle" emblem required by Wyoming law.

The vehicle being driven by the victim was a four year old pickup with no observable defects. It should be noted, however, that the pickup buckled on impact and burst into flames, burning it to the point where otherwise observable defects would not be seen.

INVESTIGATION

Through a reciprocal notification agreement with the Wyoming Department of Transportation, the WY-Wyoming FACE Project was notified of this incident by copy of a traffic accident report on May 10, 1993. On notification, the project coordinator requested and received information from the coroner and

the employer. The law enforcement report had been received during the notification process, but scene photos were requested later and received.

There is no indication of the speed the pickup was travelling prior to the impact, but on-scene evidence shows that the pickup travelled 120' from the point of contact before coming to a halt and that, within that distance, the pickup was pushing the tractor and also gouging into the pavement as a result of the cab buckling away from the bed. That buckling caused the center frame of the pickup to dig into the pavement, leaving 76' of gouge marks and breaking the gas line. As a result, the sparks ignited the fuel and the pickup burst into flames. After disengaging from the impact, the tractor continued forward to a nearby turnoff, crossed a cattleguard and came to rest in a plowed field some 200' beyond it's last contact with the pickup. This does not necessarily indicate excessive speeds. The structural strength of the backhoe was greater than that of the pickup grill and the speed difference would have been between 45 and 50 miles per hour at regular speeds.

No attempt at evasive action was noted prior to the crash and no skid marks were found at the location. Debris was found inside the cab consisting of manuals and other paperwork which may or may not have been open prior to the crash. There were also two dogs that had been riding in the cab prior to the crash. The visibility from a distance and the absence of attempts to evade suggest that the pickup driver may have been inattentive prior to impact.

The impact of the crash resulted in an apparent underride type of damage to the pickup. As the engine compartment pushed into the backhoe, the physically higher and structurally stronger resistance of the scoop and hydraulic arm had both a backward and a downward force that crushed the passenger compartment and placed stress on the central frame of the pickup where the cab and bed connect.

CAUSE OF DEATH

The Medical Examiner listed the cause of death as suffocation due to inhalation of extreme high heat and/or flames.

RECOMMENDATIONS/DISCUSSION

This incident could have been prevented by the victim or the driver of the other vehicle if either or both had made themselves more aware of safe practices. It appears that the pickup driver was not properly attentive to the driving task. The slow moving vehicle that was on the road was cited for not displaying a "slow moving vehicle" emblem required by law, and was noted as having light or signal defects.

Companies should train over-the-road salesmen in safe driving techniques and practices. The roadway environment is the working area used by road sales persons and should be considered as the primary work environment from a safety standpoint.

The victim had worked for his employer for nearly three years as one of two outside salespersons, and covered a four state sales area. He was considered by his employer to be a very likeable person who served his customers well. His employer noted that he was a non-drinker and had a good driving record.

The company has conducted sales in Wyoming since 1948, and the victim's primary duties for the company was sales and service.

Investigating officers noted that the victim was driving in clear daylight conditions with good visibility for at least ½ mile in either direction. Two dogs were in the pickup compartment with the victim, and a great deal of paper material was included in the debris at the crash site. Since there was no evidence of evasive action being attempted, there is a good indication that the victim was not properly attentive to his driving environment.

Investigators noted that the absence of a slow-moving vehicle emblem on the backhoe while traveling on a state highway is a violation of Wyoming law. They also determined that the backhoe had light/signal defects. Investigators did not find the distance the tractor travelled after the crash or the fact that the cab of the pickup separated from the bed as indicative of excessive speed as the speed differential and the differences in stability and weight of the two vehicles could result in those circumstances. The seat of the tractor was broken loose during impact and the tractor may, therefore, have travelled that distance uncontrolled by the driver.

FATAL ACCIDENT CIRCUMSTANCES AND EPIDEMIOLOGY (Wyoming FACE) PROJECT

The National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR), performs Fatal Accident Circumstances and Epidemiology (Wyoming FACE) investigations when a participating state reports an occupational fatality and requests technical assistance. The goal of these evaluations is to prevent fatal work injuries in the future by studying the working environment, the worker, the task the worker was performing, the tools the worker was using, the energy exchange resulting in fatal injury, and the role of management in controlling how these factors interact.

States participating in this study include: Kentucky, Maryland, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia.

NIOSH Funded/State-based Wyoming FACE Projects providing surveillance and intervention capabilities to show a measurable reduction in workplace fatalities include: Alaska, California, Colorado, Georgia, Indiana, Iowa, Massachusetts, New Jersey, Minnesota, Missouri, Wisconsin and Wyoming.

Additional information regarding this report is available from:

Wyoming Occupational Fatality Analysis Program
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Cheyenne, WY 82002
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Please use information listed on the Contact Sheet on the NIOSH FACE web site to contact [In-house FACE program personnel](#) regarding In-house FACE reports and to gain assistance when State-FACE program personnel cannot be reached.