

FACE INVESTIGATION

SUBJECT: Part-time Logger Pinned by Tractor Wheel after Being Knocked from Operator's Seat by Falling Tree

SUMMARY: A 56-year-old male part-time logger (the victim) died while trying to push over a dead tree with a tractor when he was knocked off the tractor and pinned under the rear tire. The incident occurred on an 80-acre plot of partially wooded land owned by the victim, along a logging road. Three volunteer co-workers were assisting the victim in clearing dead and fallen trees from the road. The victim was operating a Ford 4000 farm tractor with a front bucket attachment to knock down and remove trees, with a co-worker standing by for assistance. Another co-worker was cutting a tree nearby, while the fourth worker was moving a truck to avoid having it be struck by falling trees. The victim elevated the bucket till it was about ten feet high, then struck the trunk of a decayed tree with the bucket. The tree did not fall, so he struck it again with the bucket. This time, the top half of the tree cracked off and fell toward the victim sitting in the tractor seat. He leaned to the right to avoid the falling tree, but was knocked from the seat and fell in front of the right rear tractor tire. The tractor came to rest with the tire on his chest. The standby co-worker yelled for help, and the other two co-workers ran immediately to the scene. They pulled a large log in front of the tractor tire where the victim was pinned, then one co-worker drove the tractor forward onto the log while the other two pulled the victim out from behind the tire. One co-worker drove to a cabin to phone for help, while the others initiated CPR. EMS responders were at the scene in eleven minutes, and the victim was transported to a hospital. Advanced cardiac life support protocols were initiated in the ambulance and continued at the emergency room, where the victim expired. The FACE investigator concluded that, to prevent similar occurrences, farm tractor operators should:

- ! **follow tractor and bucket loader manufacturers' recommendations when using a bucket**
- ! **use only tractors that are equipped with falling object protective structures (FOPS) when working in a situation where objects might fall on the operator**

INTRODUCTION:

On September 26, 1999, a 56-year-old male part-time logger died while trying to push over a dead tree with a tractor when he was knocked off the tractor and pinned under the rear tire. The Wisconsin FACE field investigator learned of the incident through the newspaper on September 28, 1999. On October 12, 1999, the field investigator met with the victim's family. The FACE investigator also obtained the death certificate and the medical examiner and sheriff's reports.

The victim was the full-time owner and manager of a hardware store. He also owned approximately eighty acres of undeveloped property several miles from the rural town where the store was located. A large portion of this property was covered with trees, and had logging roads that extended into it. The victim regularly cut and removed logs to maintain the forest and the logging roads, usually using a saw for felling trees. He was described as a careful, safety-conscious individual with no history of serious injury or illness. He learned to drive a tractor from on-the-job experience, starting in his youth. The Ford 4000 tractor he was using at the time of the incident was about 35 years old; the victim had owned it for 20 years. In

addition to the front loader, it was equipped with a mower deck. It did not have ROPS or a cab. The victim used the tractor at the hardware store for snow removal and mowing.

INVESTIGATION:

On the afternoon of the incident, the victim and three volunteer co-workers had been working at the wooded property for about thirty minutes. They were there to clear dead and fallen trees from the logging road that led into the property. The victim was operating a Ford 4000 farm tractor with a front bucket attachment to knock down and remove a dead tree alongside the road, with a co-worker standing by for assistance. Another co-worker was cutting a tree nearby, while the fourth worker was moving a truck to avoid having it be struck by the falling tree. The victim elevated the bucket until it was about ten feet high, then struck the trunk of the decayed tree with the bucket. The tree did not fall, so he struck it again. This time, the top half of the tree cracked off and fell toward the victim sitting in the tractor seat. He leaned to the right to avoid the falling tree, but was knocked from the seat and fell in front of the right rear tractor tire. The tractor came to rest with the tire on his chest. The standby co-worker yelled for help, and the other two co-workers ran immediately to the scene. They pulled a large log in front of the tractor tire where the victim was pinned, then one co-worker drove the tractor forward onto the log while the other two pulled the victim out from behind the tire. One co-worker drove to a nearby cabin to phone for help, while the others initiated CPR. EMS responders were at the scene in eleven minutes, and the victim was transported to a hospital. Advanced cardiac life support protocols were initiated in the ambulance and continued at the emergency room, where the victim expired.

CAUSE OF DEATH: The death certificate listed the cause of death as traumatic asphyxia.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Farm tractor operators should follow tractor and bucket loader manufacturers' recommendations when using a bucket.

Discussion: In this incident, the victim was using a tractor with a raised front bucket loader to knock down dead tree. The manufacturer does not recommend using the bucket to strike objects.

Recommendation #2: Farm tractor operators should use only tractors that are equipped with falling object protective structures (FOPS) when working in a situation where objects might fall on the operator.

Discussion: Some rollover protection structures (ROPS) frames can be equipped with overhead canopies to protect the operator from the weather and/or from falling objects. Canopies that protect against falling objects – called FOPS (falling object protective structures) – must be properly designed and certified for that purpose. Such canopies are recommended when using front-end loaders, working in the woods, or in other circumstances where falling objects may be a hazard. To be sure that a canopy is a FOPS and provides overhead protection from falling objects, purchasers of ROPS should check with the ROPS supplier. A ROPS frame or cab should never be modified by the farmer to install an overhead canopy that was not designed for that particular ROPS. The ROPS manufacturer should always be consulted about overhead protection. The tractor in this case was not equipped with ROPS, but a retrofit structure might

have been available from a dealer.

References

A Guide to Agricultural Rollover Protective Structures. 1997, National Farm Medicine Center, Marshfield, WI. Available at www.marshfieldclinic.org/nfmc/rops .



- The upper left arrow indicates the stump of the tree struck by the bucket.
- The bottom right arrow indicates the victim's approximate location.