

Orchard Tractor Operator Run Over By Trailer-Mounted Water Tank

Industry: Apple orchards

Task: Operating tractor towing water tank

Occupation: Orchard laborer

Type of Incident: Tractor-related/Run over





FATALITY NARRATIVE

A 43-year-old apple orchard tractor operator died when he was run over by the wheels of a water tank trailer.

On the day of the incident during the harvest, he was performing one of his normal job tasks. This task involved the operation of a tractor pulling a trailer-mounted, stainless steel 1,000 gallon capacity water tank to dampen the orchard's compacted dirt and gravel roads to suppress dust while the apple pickers were working.

The orchard was located on a gradually sloping hill. The victim was driving the tractor with the attached nearly full water tank trailer downhill on an orchard road. The orchard road was constructed of dirt and gravel; it was straight, dry, and smooth with an approximate 1% slope. He was not watering down the road at this time. Investigators determined that what happened next was the result of the victim operating the tractor downhill in a gear ratio that was too high. This allowed the tractor to gather excessive speed. Due to the tractor's speed and the weight of the trailer, the tractor brakes were not able to slow the tractor. The victim attempted to shift to a lower gear ratio, but the gearshift became stuck in the neutral position. This allowed for an uncontrolled descent. The victim then fell, jumped, or was knocked from the operator's seat. After landing on the ground he was run over by the trailer wheels. He died at the scene.

Investigators found the water tank trailer separated from the tractor. A piece of broken wire was found in place of the required safety bolt on the trailer's coupler. This wire broke either just before or after the victim came off the tractor, allowing the separation of the trailer from the tractor's hitch. Also, the tractor did not have a rollover protective structure (ROPS) or a seat belt. It is possible that the victim could have survived if the tractor had a ROPS and he was wearing a seat belt.

FATALITY NARRATIVE



Incident scene looking downhill showing where the victim was found. The trailer-mounted water tank is lying on its side. The tractor which separated from the trailer is located behind the row of apple trees.

FATALITY NARRATIVE

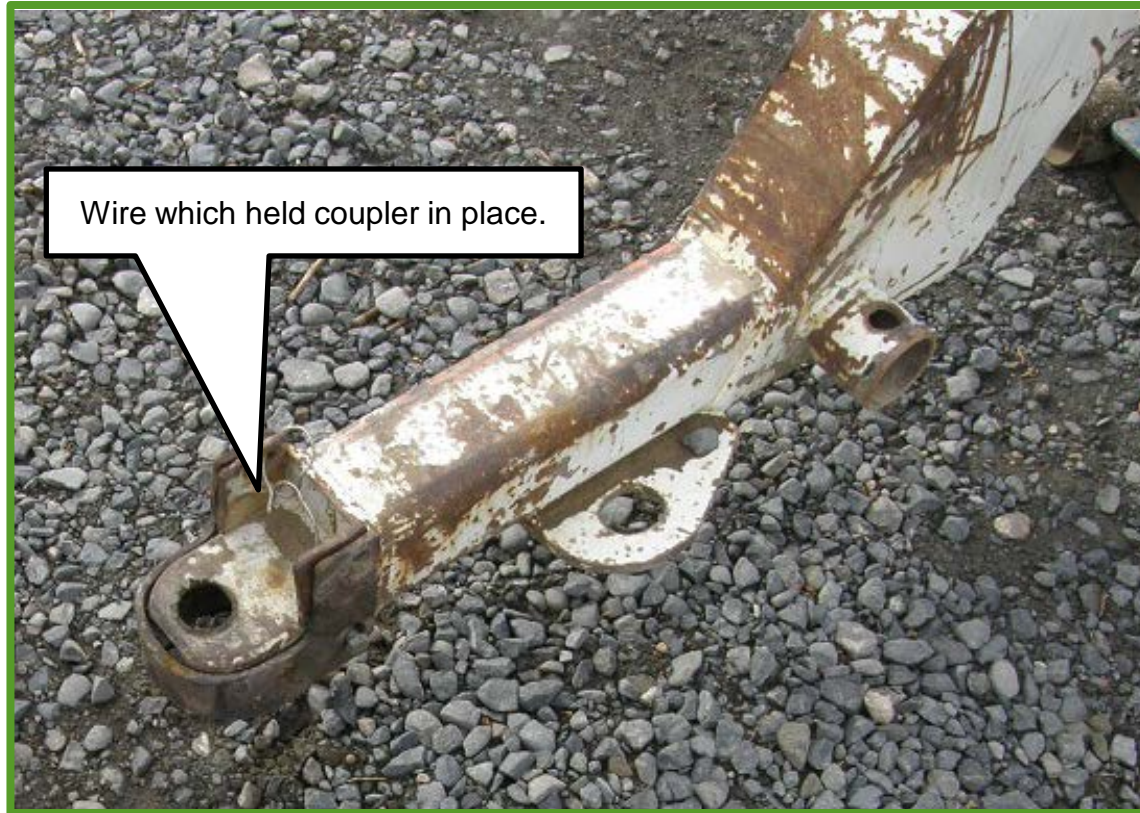


Tractor involved in the incident. It did not have a rollover protective structure (ROPS) or a seatbelt.



1,000-gallon capacity trailer-mounted water tank that was being towed by the tractor.

FATALITY NARRATIVE



Coupler and water tank trailer tongue after the incident. A piece of wire was used to replace the missing locking bolt.



FATALITY NARRATIVE

Requirements

- Train employees how to safely operate tractors that they will be required to use. See WAC 296-307-08018.
- Maintain in a safe condition towing connections between tractors and all equipment and remove from service if in need of repair. See WAC 296-307-07001.
- Ensure that tractors are equipped with a rollover protective structure (ROPS) and a seat belt and ensure that employees use the seatbelt. See WAC 296-307-08009, and 296-307-08012.



FATALITY NARRATIVE

Recommendation

Train tractor operators to understand and recognize the hazards associated with operating tractors while traveling downhill towing trailers, implements, and equipment such as water tanks and sprayers. This training should include how to safely operate the tractor and emphasize the importance of reducing speed and downshifting to the appropriate gear for the slope and terrain.



FATALITY NARRATIVE

Statewide Statistics: This was number 54 of 72 work-related fatalities in Washington State during 2008, and was number 6 of 7 agriculture-related fatalities.

This bulletin was developed to alert employers and employees of a tragic loss of life of a worker in Washington State and is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or conclusions regarding the cause of the fatality.

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