

# FATALITY NARRATIVE

## Orchard Laborer Crushed Between Grader and Semi-Truck

**Industry:** Apple orchards

**Task:** Attaching tow chain to semi-truck and grader

**Occupation:** Orchard laborer

**Type of Incident:** Crushed between / Machinery



Photo of incident scene where an orchard laborer attempting to hook up a tow chain between a semi-truck and a grader was killed when the grader struck him, crushing him between the front of the truck and grader.



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On September 27, 2009, a 38-year-old apple orchard laborer died when he was crushed between a road grader and a semi-truck. The victim had worked at the apple orchard for 7 years performing a variety of tasks including operating and maintaining orchard machinery.

On the day of the incident, a semi-truck with an attached flatbed trailer was traveling up a 6 to 7% grade gravel orchard road to a staging area where it was to be loaded with apple bins. The truck lost traction, so orchard workers decided to use a grader to tow the truck to the staging area. The towing process involved backing the grader up to the truck and attaching a chain between the two. The victim and grader operator had both used this towing method many times.

As the grader operator started reversing downhill, about 40 feet from the truck, he noticed that the grader's brakes were not working. He pumped the brakes and tried to change gears, which slowed the grader but did not stop it. The operator saw the victim and truck driver hooking up the chain to the truck and yelled to them, but they were unable to hear over the noise of the grader. The grader struck the victim, crushing him against the truck. The truck driver's right leg was pinned between the grader and truck.

An investigation found the grader's brakes functioned properly and there were no defects that would have prevented braking. Witnesses stated they saw the grader stop briefly a short distance from the victim and then jolt backwards, striking him. After the incident the operator stated that if the grader was not used regularly (it had not been used in over a week) that its brakes needed to be pumped several times before they worked properly.

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## Requirements

- Employers must furnish and require employees to use any safety devices and safeguards that are needed to control recognized hazards. All agricultural methods, operations, and processes must be designed to promote the safety and health of employees. See WAC 296-307-045(2).

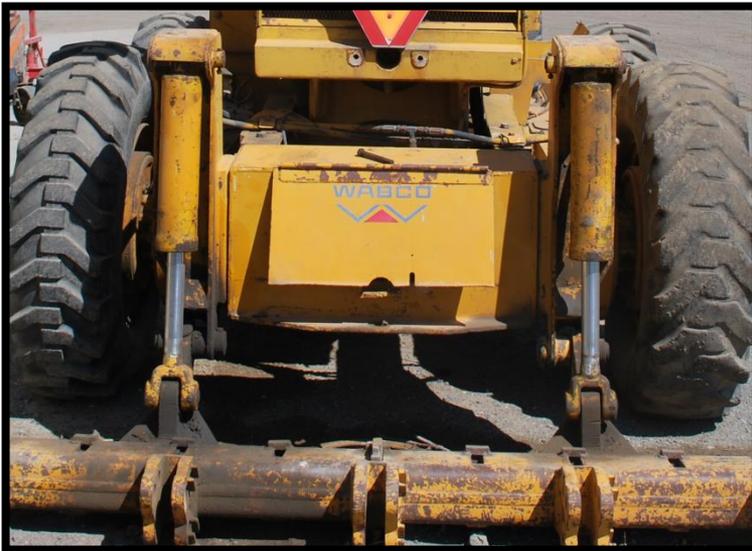


Photo of the rear of the road grader involved in the incident where the tow chain was to be connected.



Photo of the front of the semi-truck involved in the incident where the grader struck and damaged the truck.



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## Recommendations

Agricultural employers should:

- Create and enforce written comprehensive standard operating procedures for safe towing of vehicles. Such procedures may include using a spotter, wheel chocks to prevent movement of towing equipment, and not permitting an employee to be positioned between a moving piece of towing equipment and the vehicle to be towed.
  - *The employer had verbally instructed the victim and grader operator in this procedure and they both had done it many times.*
- Train employees in the hazards associated with towing vehicles.
  - *Workers decided to use a grader to tow the truck to the staging area.*
- Ensure that all heavy mobile machinery is equipped with functioning safety systems and alarms. In this incident, the grader did not have a back-up alarm.
  - *The operator saw the victim and truck driver hooking up the chain to the truck and yelled to them, but they were unable to hear.*
- Require employees operating heavy machinery to perform a safety inspection prior to operating.
  - *As the grader operator started reversing downhill, he noticed that the grader's brakes were not working.*

**Statewide Statistics:** This was number 43 of 65 work-related fatalities in Washington State during 2009, and was number 8 of 8 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.* Developed by WA State Fatality Assessment and Control Evaluation (FACE) Program and the Division of Occupational Safety and Health (DOSH), WA State Dept. of Labor & Industries. The FACE Program is supported in part by a grant from the National Institute for Occupational Safety and Health (NIOSH). For more information, contact the Safety and Health Assessment and Research for Prevention (SHARP) Program, 1-888-667-4277.

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