

Truck Mechanic Struck by Trailer Air Suspension Spring

INCIDENT FACTS

REPORT #: 71-259-2024s

REPORT DATE: October 14, 2024

INCIDENT DATE: September 11, 2023

WORKER: 68 years old

INDUSTRY: Specialized Freight Trucking

OCCUPATION: Semi-Truck Mechanic

SCENE: Hospital parking lot

EVENT TYPE: Struck by object



FATALITY NARRATIVE



A 68-year-old truck mechanic was struck by an air suspension spring he was installing on a semi-trailer. He worked for his employer, a supplier of mobile diagnostic imaging services, for eight months as a field service mechanic. He had over thirty years of experience as a mechanic and commercial driver.

FATALITY NARRATIVE



He was dispatched alone to replace the air spring, also called an airbag, on a magnetic resonance imaging (MRI) trailer parked at a hospital. When the driver came later to pick up the trailer, the mechanic told him he was only able to wedge the new spring between the mounting plates just enough to secure it with one bolt. He asked the driver to connect his tractor air supply to the trailer to inflate the springs to take weight off the axle. This would allow him to move the spring further into place and install the other mounting bolts.

FATALITY NARRATIVE



The mechanic stayed under the trailer and gave the driver instructions while the spring was inflating. It was inflating for about three minutes when the driver heard a loud boom. The spring had ejected from its wedged position and struck the mechanic in the head. The driver yelled to the mechanic but got no reply. He ran to the trailer and found the mechanic unresponsive with severe head injuries. He then ran to the hospital's emergency room for help. Medical staff rushed to the scene, where other first responders were arriving. They pulled the mechanic out from under the trailer but could not save his life.

Following the incident, investigators found:

- The mechanic did not follow the air spring manufacturer's instructions to:
 - o Fully secure the spring before inflating it. With only one bolt installed, the spring was not properly secured before being inflated.
 - o Use new bolts for the spring installation. The bolts found at the scene were worn out and one was sheared in half.
- The employer did not have a hazardous energy control plan or lockout/tagout (LOTO) program.

FATALITY NARRATIVE



Photo 1. Trailer from incident.

FATALITY NARRATIVE



Photo 2. Air spring that struck mechanic.

FATALITY NARRATIVE



Photo 3. Upper and lower mounting plates where air spring was partly wedged and then ejected during inflation.

FATALITY NARRATIVE



Photo 4. Worn, broken, and sheared air spring mounting bolts found at incident scene.

Requirements

Employers must:

- Establish a written energy control program. See [WAC 296-803-20005](#)
- Use energy control procedures. See [WAC 296-803-50005](#)
- Provide and document employee training on the energy control program. See [WAC 296-803-60005](#)

Recommendations

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

- Develop a hazardous energy control program for commercial vehicle maintenance operations, including LOTO requirements, as part of their written accident prevention program (APP). Policies should clearly identify hazards and provide precautions, controls, and how to verify zero-energy for all energized vehicle systems, including pneumatic potential energy stored within pressurized air in air suspension systems.

Recommendations

- Provide recurring hands-on training that gives mechanics the knowledge and skills to implement hazardous energy controls and LOTO requirements. Training should include showing mechanics how to properly follow the manufacturer's installation, maintenance, and safety instructions for different system components. Have mechanics' demonstrate their knowledge and skills before allowing them to work on or near vehicle systems where hazardous energy is present. Conduct periodic refresher training and support it with toolbox talks and safety meetings.

Recommendations

- If lone remote work is unavoidable, require field service mechanics to call their supervisor to verify they have applied hazardous energy controls or LOTO before repairing an energized vehicle system.

Resources

[Lockout/Tagout \(LOTO\): Overview, Policies, Training](#)

Washington State Dept. of Labor & Industries

FATALITY NARRATIVE



This narrative was developed to alert employers and workers of a tragic incident 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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