



National Transportation Safety Board

Railroad Accident Brief

Union Pacific Railroad Employee Fatality

Accident No.:	DCA13FR012
Location:	Mathis, Texas
Date:	September 4, 2013
Time:	4:15 p.m. central daylight time ¹
Railroad:	Union Pacific Railroad
Property Damage:	None
Injuries:	1
Fatalities:	1
Type of Accident:	Employee fatality

On September 4, 2013, about 4:15 p.m., in Mathis, Texas, a Union Pacific Railroad (UP) welder was killed and another UP welder was seriously injured when an S-60 Trax aerial lift vehicle overturned.² (See Figure 1.) At the time of the accident, the temperature was 102°F, and the weather was clear. The accident occurred on the UP San Antonio Service Unit of the Corpus Christi Subdivision main line at milepost 106.



Figure 1. Exemplar S-60 Trax aerial lift vehicle.

On the morning of the accident, the welder, who was assigned to operate the S-60 Trax aerial lift vehicle, went on duty at 9:00 a.m. in Mathis, Texas. He had received a job briefing, and he had not taken exception to the work planned for the day. He was part of a UP work crew that was working on a fixed wooden bridge. The bridge was 192-foot-long and 45-foot-high. On both sides of the bridge abutments were steep embankments to the valley floor. The S-60 Trax aerial

¹ All times shown in this report are central standard time.

² An S-60 Trax vehicle is designed to lift personnel and tools to an aerial worksite.

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lift vehicle was on a flat section of ground below the center of the bridge. This area was usually filled with water; however, the ground was dry at the time of the accident.

While a UP welder was repairing a railroad bridge from the lift bucket of an S-60 Trax aerial lift vehicle, the lift bucket became stuck on two cap bolts in a concrete girder. (See Figure 2.) After several attempts, he was unable to free the lift bucket. Two UP welders, who were working directly above the welder, saw that the lift bucket was stuck. To offer assistance, one of these welders unhooked his fall-arrest system and climbed from the bridge into the lift bucket. This welder did not re-secure himself to the fall-arrest system once he was in the lift bucket.



Figure 2. Cap bolts that restricted the movement of the aerial lift bucket.

After about 5 minutes of operating the controls of the lift, the unsecured welder freed the bucket. Upon being freed, the lift bucket suddenly dropped about 3 feet, and then it sprung upward. As a result of this sudden movement, the unsecured welder was ejected from the lift bucket; he fell about 30 feet to the ground. He was transported to the Corpus Christi Memorial Hospital in Corpus Christi, Texas. He had a dislocated hip, a broken leg, and a collapsed lung. As the lift fell to the ground, it hit several bridge supports. (See Figure 3.) The welder, who was in the bucket when it struck the ground, was killed.

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Figure 3. The overturned S-60 Trax aerial lift vehicle.

Occupational Safety and Health Administration (OSHA) regulations in Title 29 *Code of Federal Regulations* (CFR), 1910.67(c)(2)(iv) states, “employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.” Additionally, 29 CFR 1910.67(c)(2)(v) states, “a body belt shall be worn and a lanyard attached to the boom or basket when working from an aerial lift.” Finally, regulatory language contained in 29 CFR 1910.67(c)(2)(ii) states “only trained persons shall operate an aerial lift.”

The aerial lift had two sets of controls, which can be operated as follows:

- (1) by a person in the aerial lift bucket
- (2) by a person on the ground

In the section titled “Work Area Safety” of the operators manual for the S-60 Trax aerial lift vehicle, the following is stated:

Do not use the platform controls to free a platform that is caught, snagged or otherwise prevented from normal motion by an adjacent structure. All personnel must be removed from the platform before attempting to free the platform using the ground controls.

In this accident, both welders failed to comply with the OSHA regulations and the equipment operators manual instructions. One welder improperly climbed into the lift bucket, and he did not properly secure himself. Both welders tried to free the equipment by using the controls in the lift bucket instead of the ground-level controls.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the accident was the welders’ attempt to free the snagged aerial lift bucket from within the bucket, in lieu of evacuating the bucket and using the ground controls.

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For more details about this accident, visit www.nts.gov/investigations/dms.html and search for NTSB accident ID DCA13FR012.

Adopted: June 27, 2014

The NTSB has authority to investigate and establish the facts, circumstances, and cause or probable cause of a railroad accident in which there is a fatality or substantial property damage, or that involves a passenger train. (49 U.S. Code § 1131 - *General authority*)
