

# Rapid Lesson Sharing

**Event Type:** Trailer in Tow Disconnect

**Date:** July 29, 2016

**Location:** State Highway 90,  
Arizona

*After slowing down and stopping in the parking lane, we discovered that the trailer hitch had disconnected from the ball on the receiver hitch. One of the two safety chains had ground through and was hanging on the trailer tongue.*



## NARRATIVE

Two Safford Ranger District fire employees traveled to the Sierra Vista Ranger District to borrow their two electronic sign boards for going fires on the Safford Ranger District. This incident's participants will explain what happens next.

After hooking-up both sign trailers at the Libby Tanker Base, we traveled back to Safford. Approximately one mile north of Huachuca City on Arizona State Highway 90, I heard a noise behind my vehicle and saw a puff of smoke. On the radio, I asked the other firefighter, who was behind me a few hundred yards, what was happening—as I couldn't see any of the trailer due to the box on my vehicle.

His response was: "You're dragging something." After slowing down and stopping in the parking lane, we discovered that the trailer hitch had disconnected from the ball on the receiver hitch. One of the two safety chains had ground through and was hanging on the trailer tongue.



## LESSONS

### **All Towing Attachments Seemed Adequate and Proper – So How Did This Happen?**

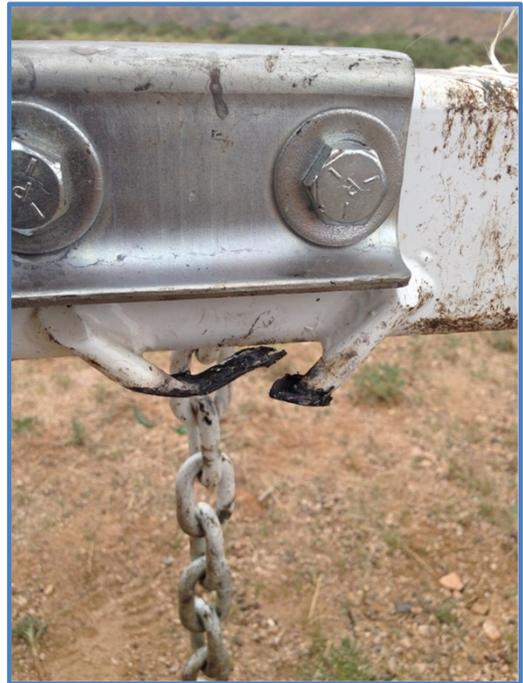
A total of five firefighters—three from the Sierra Vista Engine and the two of us from Safford—had either assisted with hooking-up the trailer or physically inspected the connection prior to beginning travel.

The vehicle used for towing was well within the weight rating for towing these light electronic sign trailers. The trailer hitch indicated it requires a two-inch ball, which was the size used.

Both safety chains were in "good" to "new" condition, had the required DOT attachment (self-closing clip or gate), and were properly crossed under the tongue of the trailer.

Several of us physically lifted the trailer tongue up after connecting the trailers to the tow vehicles. We all felt the attachments were adequate and proper. However, it turned out that the attachment was not adequate, resulting in the trailer becoming disconnected from the receiver hitch at approximately 55 to 60 mph on a public road.

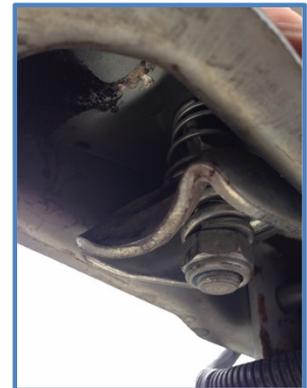
No injuries occurred and no damage to the towing vehicle occurred. Damage on the sign trailer was limited to the two areas where the safety chains are attached. Both safety chains were in contact with the pavement for a distance. This resulted in one of the chains being ground through and converted into two separate chains. The electric connection was also severed.



**Problem Discovered—  
and Corrected**

After closer inspection, we noticed that the small piece of metal that is normally pulled up under the ball when the trailer is connected onto the ball was too low and not in the necessary position to hold the trailer onto the ball. It was tight enough to hold the trailer tongue on the ball when we lifted up on the trailer tongue—resulting in what appeared to be a correctly attached trailer.

This tongue-to-ball hitch connection was corrected using a box wrench to tighten the nut on the underside of the hitch. After this correction was made, no further problems developed on either trailer being towed.



**This RLS was submitted by:  
District Fire Management  
Safford Ranger District**

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