

Lessons Regarding Switching Hitches on Transport Trailers

Prescribed fire season in the Northern Plains states is often busier than their wildfire season and they are in full swing this year.

Toward the end of a busy month of burning in late April, a Marsh Master® operator had an assignment to complete line prep for a prescribed fire in a neighboring state. The Marsh Master® is a 6,500-pound aluminum tracked amphibious vehicle used in marshy areas to mow firebreaks. The trailer used to transport this machine is a heavy-duty trailer that requires a 2-5/16-inch ball.



The operator climbed into the tow vehicle and prepared for the 272-mile trip. Approximately 5-1/2 hours later, he arrived at the U.S. Fish and Wildlife Refuge, backed up, parked the trailer, and headed to the hotel for the evening.

The trailer began to fishtail and tip from side to side. Its right front corner dug into the pavement. This caused the safety chain bolt to shear off, the tie-down straps to break, and the Marsh Master® to roll over onto the highway.

The next morning, the operator left the hotel and headed to the fire cache where his coworker was waiting. Today's task was to hook-up to a trailer that held a fire UTV for a planned prescribed fire that afternoon.

When the operator backed-up to the UTV trailer, he realized that he needed to change the receiver hitch to a 2-inch ball, not the 2-5/16-inch ball that was already on the tow vehicle. The operator's home unit had standardized all their trailers to 2-5/16-inch balls. Therefore, he didn't have a 2-inch ball.

The coworker loaned the operator a 2-inch ball, helped hook-up to the trailer, and the operator began the approximate 30-mile trip out to the prescribed fire unit. After a day of burning, the operator left the burn unit, double-checked all the prescribed fire's control lines and returned to the hotel.

Operator Drives Back to Home Unit with 2-Inch Ball Still on Trailer

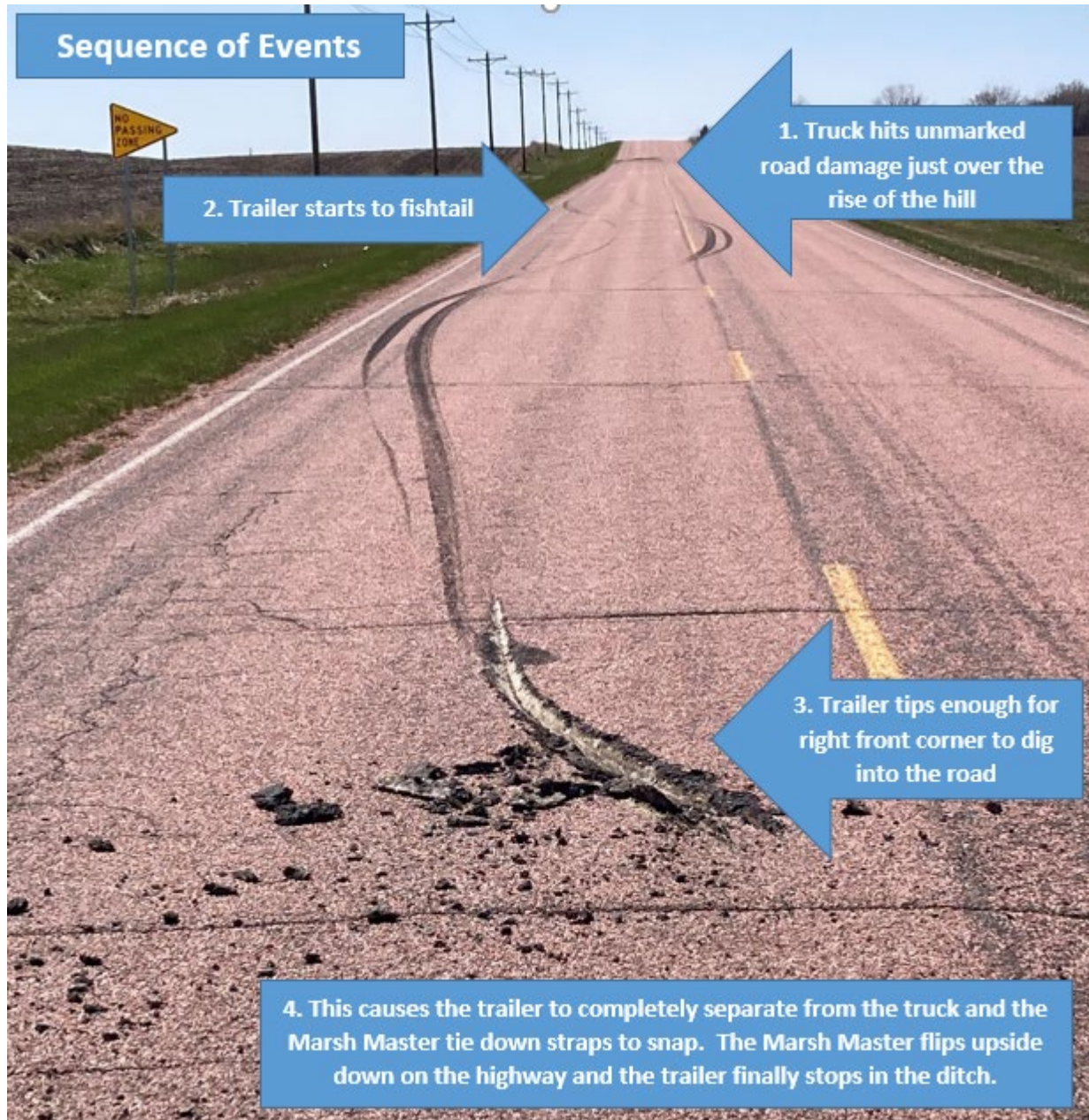
The operator left the hotel the next morning and drove to the prescribed fire unit to check the fire from the previous day. He made a lap around the unit and didn't see any areas of concern.

With the prescribed fire completed, the operator drove the approximate 30 miles back to the Refuge to prepare to transport the Marsh Master® back to his home unit. As he arrived at the Refuge, he parked the trailer with the fire UTV then backed up to the Marsh Master®, hooked it up, and started the 272-mile drive back home.

From this point forward, the operator was pulling the Marsh Master® with the same 2-inch ball borrowed from the day before, not the 2 5/16-inch ball needed for the trailer.

He was almost home when he encountered unexpected road damage. Just over the rise of a hill, a very large, unmarked pothole was in the roadway. (See photograph below.) When the operator hit this pothole the hitch uncoupled from the ball.

The trailer began to fishtail and tip from side to side. Its right front corner dug into the pavement. This caused the safety chain bolt to shear off, the tie-down straps to break, and the Marsh Master® to roll over onto the highway. It all happened fast. The operator was able to stop the truck safely, without damage or injury. He called the police and secured the scene.



Lessons

A high-tempo/long-duration mode of operations can contribute to mental fog and a loss of focus on routine tasks—like hooking up a trailer. Best practices therefore include:

- ❖ Establishing a checklist and/or buddy-check protocols for trailer hookups to ensure the ball and coupler are the correct size, the chains are properly crossed and connected, the lights and brakes work, etc.
- ❖ Color-coding like-sized ball/coupler setups. This provides a simple visual indicator and makes it extremely easy for employees to spot a mismatched ball/coupler, even from a great distance away.



- ❖ Standardized hitch sizes at one Refuge—different from another Refuge—led to reduced awareness that the tow vehicle needed to be switched back from the 2-inch ball to the 2-5/16-inch ball. It's better to be in the habit of always checking sizes than never having to check sizes.

This RLS was submitted by:

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