

Rapid Lesson Sharing

Event Type: UTV Tip Over

Date: August 3, 2023

Location: Southwest District
Bureau of Land Management
Colorado

The Story and the Lessons from a UTV Tip-Over Incident

An initial attack squad was utilizing a 2015 Polaris Ranger 800 UTV to scout a reported smoke when the UTV tipped onto its side after making a sharp turn in the mud. While the operator was not injured, the two passengers sustained minor injuries and soreness.

The UTV was equipped with: a 50-gallon water tank/pump that was three-quarters full of water, a spare tire, hand tools, and line gear hanging from the top of the rollover protection system (ROPS).

The road conditions consisted of water puddles, ruts, and mud—creating poor traction.

While traveling back to the transport vehicles, the UTV made it through the rutted areas and reached the top of a hill onto a flatter area. Upon reaching this flat ground, the operator made a quick left turn into a muddy area and the UTV tipped onto the passenger's side. The driver and both passengers were all wearing full PPE and seatbelts.

As a result of the tip over, the passenger on the outside impacted the ground. The passenger in the middle seat braced against the dashboard. This UTV was not equipped with doors. Thus, the right foot of the passenger who impacted the ground became pinned under the UTV when it came to rest on the passenger side.

After the operator exited the UTV from the driver's side and the middle passenger exited from the front windshield area, they were able to assist the second passenger free her foot so she could also exit through the windshield area.

After a thorough inspection of the UTV by a Polaris dealer, it was determined that there was damage to the cargo box, cargo box supports, tailgate, and taillight. There was no damage to the UTV's ROPS.



Lessons

1. The crew conducted an After Action Review (AAR) following the incident and discussed several contributing factors to the tip over.
 - Cutting the wheel too sharp to the left before decreasing the UTV's speed.

- The water tank was partially drained from a previous fire. We did not take the time to refill it, even though we were going to a new fire start. This may have caused the water to shift more in the tank, increasing the risk of rollover.
- Having the line gear mounted next to the roof on the ROPS. Having the weight up high may have changed the UTV center of gravity.
 - ✓ Always load the cargo box with the load as far forward and as low as possible. Reduce speeds while carrying heavy cargo.
- The poor road conditions resulted in very limited traction.
 - ✓ Decrease speeds and use extra caution while operating on slippery surfaces.



Typical gear configuration while responding to smoke reports.

- Operating the UTV without doors allowed the passenger's foot to fall out of the UTV and become pinned.
 - If they are not equipped, install manufacturer's approved doors on all UTVs.
- After reviewing the operator's manual, it was determined that the UTV would require a thorough inspection of the machine, including the ROPS, by an authorized dealer before being put back into service.
 - Polaris Ranger Manual – *"Always have your authorized POLARIS dealer thoroughly inspect the ROPS if it ever becomes damaged in any way."*
Some items to look for during this inspection: *"Permanent deformation or twisting. Missing, damaged, or loose mounting hardware. Mounting hardware that is of a grade lesser than specified. Any cracks in the structure (structural members and/or welds). Significant corrosion. Modifications, (i.e. unauthorized welds and holes)."*

This RLS was submitted by:

- Initial Attack Squad
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The Story and Lessons from Another UTV Tip-Over Incident:

<https://lessons.wildfire.gov/incident/salmon-challis-nf-utv-accident-2012>