

Freestone County UTV Rollover

Lessons Shared



On March 14, 2018, Texas A&M Forest Service (TFS) resources were requested to the County Road 241 Fire in Freestone County, Texas. While performing fire suppression operations, a Utility Terrain Vehicle (UTV) with one firefighter rolled over resulting in minor injuries and minor damage to the equipment.

Narrative

“There is no normal fire. But as far as fires go, it was normal.”
-TFS I.C.

On the evening of March 13, 2018 TFS resources (Crew 1) were dispatched to South Butler fire in Freestone County, TX. The fire was 370 acres burning in predominantly grass with some timber. The crew responded with a Type 4 Tractor Plow and UTV with Suppression Unit. The suppression unit was a skid mounted pump and 65 gallon agricultural tank hard mounted in the bed of the UTV. Crews worked late into the night to suppress the fire. The crew returned to the fire on the morning of March 14 to improve line and mop up. After being released from the South Butler Fire at approximately 14:34 the crew returned to their home unit.



The UTV after being winched onto its driver side with dozer in the background to finish winching upright.

Crew 1 arrived at their home unit at 15:00. At 15:06 they were dispatched to the County Road 241 Fire in Freestone County. They arrived on scene at 16:15. Crew 1 established unified command with the local incident commander and engaged the fire. Local fire department resources were burning out an indirect road along the right flank due to steep topography and elevated fire behavior associated with upslope runs in mature, thinned pine. The fire was estimated at 15 acres.

Crew 1 bladed line down the left flank to the base of a large slope. The operator unable to construct line uphill due to the steep grade. The operator and TFS Incident Commander (IC) met and decided to track the dozer up a farm road through the black to the top of the slope. Line would then be constructed downhill and tied into the line at the bottom of the slope. Crew 1 continued line production down slope and tied in with the initial line. At 16:40 the IC requested a second tractor plow unit due to fire behavior and steep topography. Crew 1 tied in lines at approximately 18:30. The second tractor plow (Crew 2) arrived on scene at 18:41. Crew 1 and 2 continued to improve lines and prep for burn out operations.



Dozer line running up slope were the incident occurred with the secondary line from equipment recovery mid-slope to the left.

At approximately 19:40 the IC was scouting lines via UTV to prepare for a burn out. The IC came to a steep slope. The lower 15' section was steepest at roughly 70% to 80% slope (35° to 39°). The IC started up the slope with the UTV. The UTV was roughly 10 feet up the slope when the IC realized the UTV could not make it up the hill. He let off the throttle and the UTV rapidly began to coast backwards. The operator hit the brakes, causing the front tires of the UTV to come off the ground. The UTV began to slowly stand straight up, then continued to roll backwards. The UTV landed on its roof with the front facing downhill. The IC was not wearing a seatbelt and was knocked onto the roof of the UTV when the rollover occurred.

“When it hit, I hit the roof.”
–TFS I.C.

The IC crawled out of the UTV and sat, “collecting his thoughts” for about ten minutes. He then radioed for Crew 1 and 2 to check on them but was unable to make contact due to topography. He then called Crew 1 by

cell phone and informed him of the rollover incident and requested assistance to recover the UTV. Crew 1 proceeded to the accident site through the black. At that time the IC called Crew 2 and transitioned command to him via radio. All resources on the fire were notified of this change. While the IC was waiting on Crew 1, he began recovery operations, using the bumper mounted winch on the UTV. He successfully winched the UTV back onto the driver side when Crew 1 arrived at the accident site.

Immediately after arriving on scene, the Crew 1 dozer operator asked the IC if he was okay and if he needed to get checked out. The IC complained of a sore back and acknowledged that he should get checked out by a medical professional. At 20:00 the IC notified dispatch and his supervisor of the incident. The dozer operator then relocated the dozer mid-slope to finish recovering the UTV. The IC operated the tractor plows winch while the dozer operator pulled the winch line and coordinated the recovery. At approximately 20:30 the UTV was winched back onto its tires. The UTV was allowed to sit for roughly 30 minutes before being started. At approximately 21:15 the IC drove the UTV to the parking area and loaded the UTV on a trailer. At this time the decision was made to cease operations on the fire due to steep topography and visibility issues associated with night operations. Crews would return the following morning to continue mop up and securing the fire. Crew 1 secured his tractor in the black for the night. The fire was left at 90% containment with some pockets of unburned fuel between the fire and containment lines. At 21:36 all TFS crews cleared the fire.

Crew 1 drove the IC to the local emergency room where he was met by his family. He was checked out and was found to have a compacted and fracture of a thoracic vertebrae (T-11). He was released from the hospital later that evening with work restrictions due to the back injury.

Lessons Learned

- **Do you know your medical plan? Are you conducting a patient assessment?**

Even though the IC did not appear to have any major or life threatening injuries, following the identified medical plan is important. In addition, the 9 Line is readily accessible in the IRPG and is the national standard to determine the severity of the patient and transport priority. These tools should be utilized on every incident to ensure any medical issues are clearly identified and addressed at the appropriate response level. Are you familiar with the 9 Line?



The UTV after return to the local office. Note the bow in the roof from the roll over.

- **What happens if the Incident Commander is the one injured? Who becomes the Incident Commander in their place?**

When an injury occurs, regardless of who is involved, it becomes an incident within an incident. Should the IC be involved in the incident, there should be a transfer of command to another qualified IC. Identifying the IC is common practice in a briefing, but who is second in command? Are you ready to step up?

“I felt it was my responsibility to take care of everything. It’s my job in that leadership role.” -TFS I.C

- **Are you wearing your seatbelt while operating a UTV?**

The UTV operator was not wearing a seatbelt while on the fire. While utilizing UTVs for suppression operations, scouting and crew shuttles it often becomes cumbersome to put on and take off a seat belt. Creating a work around to save time and effort can compromise safety. Do you wear a seatbelt while operating or riding in a UTV? Why not?

- **Are UTVs operated with or without a suppression unit? Do suppression units or carrying a load change the way the UTV operates?**

UTVs can be configured in several different formats. They can carry a suppression unit mounted in the rear of the vehicle, carry cargo, and shuttle people. This makes them extremely versatile and why they are utilized for wildland fire suppression. Operators should be familiar with the UTV they are operating and understand that the vehicles capabilities and limitations may be altered by the extra weight or dynamics of carrying water. Are you as an operator aware of the changes in your UTVs capabilities throughout each shift and as missions change?

- **Is your UTV training representative of a real world scenario?**

TFS requires all UTV/ ATV operators to complete training to become qualified. This training is generally completed on level ground and utilizes a variation of UTVs. UTVs may have different modifications, including suppression units that vary from office to office. Operators should train and become familiar with operating their UTVs in various applications and terrain. Do you train on UTV operations at your local unit?

- **Are you familiar with the line you are driving? Have you scouted any sections you have not seen?**

With daytime operations transitioning into night ops, the unseen portion of constructed dozer line was perceived as “not that bad.” However, the slope exceeded the capabilities of the machine and resulted in a roll over. Be sure to scout any lines on foot that have potentially hazardous terrain or could cause potential issues to equipment operations. Scouting is dangerous, how much more risk is assumed while scouting on a UTV/ATV?

Resources

Texas A&M Forest Service Safety Manual

[http://txforestsERVICE.tamu.edu/uploadedFiles/TFSMain/Finance_and_Admin/Staff_Resources/Employee_Development/TFS%20Safety%20Manual%20\(General%20Hazards\).pdf?n=7062](http://txforestsERVICE.tamu.edu/uploadedFiles/TFSMain/Finance_and_Admin/Staff_Resources/Employee_Development/TFS%20Safety%20Manual%20(General%20Hazards).pdf?n=7062)

Texas A&M Forest Service Agency Guidelines / Accident and Injuries

<http://txforestsERVICE.tamu.edu/agencyguidelines/>

Rapid Lesson Sharing 9 Line

<https://www.wildfirelessons.net/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=23b8b3cd-270c-43b5-96d4-95c82688b7c5&forceDialog=0>

Medical Plan / 9 Line Form

https://www.nwCG.gov/sites/default/files/products/ics-forms/ics_206_wf.pdf

Polaris Ranger Owners Manual

[2015 Polaris Ranger EFI 570 Owners Manual](#)

Slope Reference Chart: Degrees to Slope Percentage

https://wfdss.usgs.gov/wfdss/ref_materials/Slope.pdf