

FACILITATED LEARNING ANALYSIS

CATTAIL FIRE

UTV BURNOVER/DESTROYED BY FIRE

Event Type: Wildfire Initial Attack, Burnout Operations, UTV Operations

Date: June 14th 2015

Location: National Forests in Florida - Osceola Ranger District

The down and dirty

On Sunday, June 14th 2015 at 1209 hours, the Cattail Fire was reported on the northern end of the Osceola Ranger District of the National Forests in Florida. A Type 6 engine, detailed from North Carolina, and an Incident Commander Type 4 (ICT4), local district employee, were dispatched to the reported fire. They were able to locate the fire at 1258 hours, gave dispatch a size up of 50-60 acres and requested a spot forecast. The fire was burning in a 2 year rough (Fuel Model 7, Southern Rough, that was prescribe burned 2 years prior to the fire), with 2 -4 foot flames.

The Osceola Ranger District has a spider web of non-system, unmaintained roads that are great natural barriers for fire control once cleaned out by heavy equipment. The firefighters began to scout the fire and identify the best roads for burnout operations. After scouting the fire, identifying the best roads for burnout operations and clearing those roads, the firefighters started burning out. During burnout operations two firefighters experienced a shift and increase in the winds. This change in winds also increased fire behavior in the area. The fire went from a 4 - 6 foot flanking fire to a head fire of 15-20 foot flames and pushed towards them. As the head fire approached their location the two firefighters decided to disengage from the firing operation. They returned to the UTV support vehicle to drive out of the area. As they jumped into the UTV, the fire spotted over the road in two locations adjacent to the UTV. The spots started to quickly grow together and were pulled into the main fire front. Due to the amount of heat the firefighters were experiencing from the fire front and the spots, they



UTV showing the standard set up of UTVs on the Osceola Ranger District



The UTV after the fire front passed and the area had cooled for firefighters to re-enter

decided it was time to drive out of the area to a safer location. As they put the UTV in gear, it died. They restarted the UTV and placed it in gear only for it to die again. At this point, the firefighters decided to abandon the UTV and leave the area on foot. They called the ICT4 on the radio and informed him of their situation.

The ICT4 drove south towards the area the firefighters were located and found the fire was laid over the road between them. Once the fire had crossed the road and cooled down, the ICT4 continued south to find the UTV on fire. Knowing it could not be saved, he called for an engine and a dozer to come put line around the spot fire near the UTV. He continued south along the road locating the uninjured firefighters. As the situation allowed, the ICT4 notified the District Ranger of the incident.

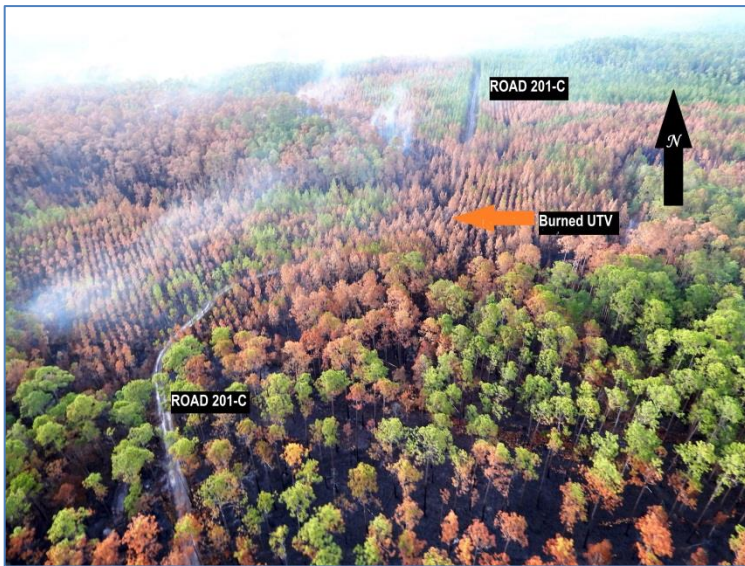
Are you interested in the rest of this story? Then please continue reading

Now for their story:

It was another typical day as firefighters staged for an initial attack on the Osceola Ranger District, National Forests in Florida. At approximately 1230 hours, an ICT4 (Mike), the local district Fuels Technician, in a truck pulling a local district UTV on a trailer and a Type 6 engine (E-699), detailed from North Carolina, staffed with three firefighters, were dispatched to a reported wildfire. E-699 was staffed with an Engine Boss, Firefighter Type 1 (Joe) and a Firefighter Type 2 (Chester). Upon arriving at the fire, Joe and Chester unloaded the UTV off the trailer. Joe, a fully qualified UTV operator was very familiar with the Kubota UTV, since this UTV is the same make and model on his home unit. They checked the fuel and water on the UTV and began to scout the surrounding roads, locate the fire and relay information to Mike, as he was also scouting the main fire on foot. The Engine Boss did the same checks to E-699 and then traveled in a different direction for another assignment working with the dozer on site. Mike found the fire to be burning in a swampy area with 2-4 foot flames, showing heavy smoke because of the wetter fuels in the swamp, but it was burning good due to the drier than normal season. Working on the district for the last 12 years, Mike was very familiar with the fuels and how they burn. He also remembered prescribe burning this area two years prior. Being a former equipment operator on the district, Mike also is well aware of the rehab needs for any dozer line constructed in the swampy areas and how much of a time and resource consuming undertaking the rehab could be. With this knowledge Mike decided the best tactic was to go indirect and burn off the road system.



Similar UTV on trailer



Once back at his truck, Mike asked Joe to get a GPS location for the fire while he tied in with the state resources on site. Meanwhile, the dozer with E-699 began cleaning out the 201C road and was pushing small pullouts about every 60 yards but sometimes less. Joe called Mike on the radio and said, *"If we burned out the 201C road we could catch it."* Mike responded and said he also thought that idea would work. As Joe continued to drive the UTV both on and off road, he could hear an odd noise coming from underneath the UTV, possibly coming from the drive train but the noises stopped just as randomly as they started. The odd noises did not seem to effect the operations of the UTV. Mike told Joe and Chester

to hold tight at the intersection of 201 and 201C to let the dozer finish clearing the 201C and he again agreed with Joe about burning out along 201C. While waiting, Joe noticed fuel had sloshed out of the *"jerry cans"* and had completely covered the UTV bed in flammable fluid with some pooling of fuel.

As the fire developed Joe did not see conditions that raised red flags for him, it was *"a typical initial attack fire."* Once the dozer was done, Joe and Chester jumped in the UTV and headed down the 201C. They met up with Mike on the road, and discussed the fire situation.

At approximately 1400 hours, Mike told Joe and Chester to begin burning out along the road. *"Put some fire on the ground to check the fire up."* Joe pulled the UTV off the road into the nearest dozer push out to let Mike

drive past the UTV so he could get tied in with the arriving State Dozer. They decided to begin the burn out at that location, since the UTV was in what was perceived, given the fire behavior and burning conditions at that time, as a “safe place.” Their location was also the point the fire was nearest the road. The main fire was within 100 feet of the road with 4-6 foot flame lengths. Joe left the UTV running, in neutral and the emergency brake on, “ready to roll” for quick egress if needed.

“As soon as I started lighting I could feel the heat, my gut told me this was not a good thing.”
~Chester

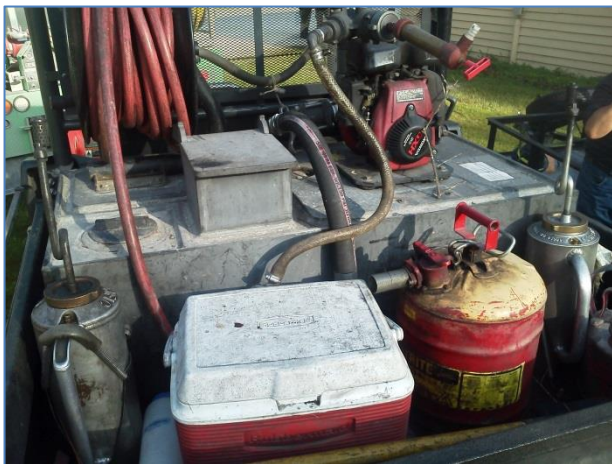
Joe had initially planned on Chester and himself burning out the road in opposite directions. However, due to conditions Joe decided to let Chester do the lighting under his guidance. Chester lit his torch and began to burnout along the road, working towards the south. As Chester started to burn, the wind picked up to approximately 5-7 mph and changed directions. Joe could now

feel the wind on his face and noticed the fire activity increase. As Chester continued to light but he was only able to get a total of 15 feet of the control line lit when a finger of fire began forming with the increase of wind, to the south of them. The finger of fire “ran” north past them while the rest of the fire began to “stand up” to approximately 15-20 feet flames and pushed towards them on the road.

“I felt the fire was drawing together over our heads. This is no place for us to be”
~ Joe

As the fire behavior began picking up and pushing toward the road, Joe made a decision to stop the burnout operation. Joe directed Chester to stop burning and load up in the UTV. Joe then called Mike on the radio and communicated they had stopped the burnout operations due to the fire “blowing up” at their location. Although this was Chester’s first time experiencing fire behavior like this, and things were moving rapidly, he was clear about the direction Joe was giving him and trusted his decisions. As they got in the UTV, the fire

spotted across the road near the front of the UTV and Joe called Mike on the radio informing Mike they had spots across the road. Mike then directed the dozer and E-699 to head to Joe’s location to assist. Joe put the UTV in reverse to back down the road, but as he put it in gear the UTV motor died. He placed the gear shift back in neutral and started the engine. He then placed the UTV into drive and it died again. The spot fires began to grow together. Joe and Chester could feel the heat from the approaching head fire and it was getting very intense. They then got off the UTV with the idea to start fighting fire with the 60 gals of water on board the UTV. As Joe reached over to start the pump, embers from the fire were falling into the spilled fuel in the UTV and Joe could feel the hair on the back of his hands and face burning from the radiant heat. He heard and saw the embers as they landed in the fuel, sounding and acting like “4th of July



How comfortable are YOU with extra fuel?
How much spilled fuel is too much?

sparklers,” but there was no open flame. Without a fire extinguisher, Joe realized with the fuel soaked UTV bed and the fire in close proximity to them, the risk they were exposed to was increasing too rapidly for them to stay in place. Joe made the decision to abandon the UTV and told Chester it was time to go. Chester realized at that moment “life was more important than a machine,” and was ready to leave. Joe and Chester sprinted down the road approximately 75 yards to safety.

While running, Chester was feeling the heat from the fire front, it was so intense he had to place his hand over the side of his face, tipping his hard hat down to block the radiant heat from the fire. As Joe and Chester were running down the road to the south, Joe called Mike on the radio and told him the fire had *"Blown up on them and they are abandoning the UTV, leaving the area on foot to the south."* As Mike receives this radio transmission, and knowing they were within eye sight of him, immediately turns around and looks to the south to see fire laid over the 201C road between him and the location of the two firefighters. Mike turned his truck around and drove down the 201C road to get a better assessment of the situation. Mike got to a point he could not drive down the road due to the heat. Concerned about Joe and Chester, all Mike could do was watch as fire rolls across the road in front of him. Within seconds of Mike having to stop, Joe called him on the radio and let him know they were in a safe location and they were uninjured.



First view Mike has of the UTV
"As soon as I saw the UTV, I knew there was nothing I could do to save it. My little 5 pound ABC fire extinguisher just does not have what it would take to put THAT out. It was fully involved."
 ~Mike

drove around the fire the message finally sent after a half hour of him hitting the send button. The message was sent to the District Ranger and District Fire Management Officer. The District Ranger received the message and drove to the office. At 1618 hours, the District Ranger arrived at the office and called Mike on the radio and advised he was *"at the office and will be in route to the fire shortly."* The District Ranger was on his way to the fire at 1638 hours. Once he arrived at the fire, the District Ranger got a full briefing from Mike on the UTV burnover and immediately checked on Joe and Chester to make sure they were ok. At 1725 hours the District Ranger left the fire and advised dispatch he will call them on the phone once he was back in cell service.

In the last 5 years we **KNOW** of 14 incidents involving flammable liquids. Have we "normalized" the use of flammable liquids around fire?

Click the link to view the full RLS from the Lessons Learned Center:
http://bit.ly/Fuel_IgnitionsRLS



"IT WAS FULLY INVOLVED, NOTHING I COULD DO TO SAVE IT"

At 1420 hours, the flames died down to the point Mike was able to continue driving down the 201C road. As he drove south along the road he came to the UTV. As Mike drove past the UTV to find Joe and Chester, he saw the seat, dash, diesel fuel tank, *"jerry cans,"* and 60 gallon fiberglass water tank all on fire. Mike kept driving south on the 201C road and found Joe and Chester standing in the middle of the road uninjured. Mike doubled checked to make sure they were uninjured and *"OK."* Once Mike was sure they were *"good to go,"* he had Joe and Chester continue firing the 201C road to the south and tie the fire into the intersection of the 201 and 201C roads. Once the firing operations were completed, Mike knowing there was going to be some level of *"investigation"*, had Joe and Chester begin documenting what happened. Mike had made several attempts to notify the District Ranger via cell phone but cell service was very limited on the fire, so he wrote a text message and hit send knowing the message would send once he hit a pocket of service. As Mike

From Dispatch Log: 1811 - District Ranger to Dispatch via phone call; *"There was UTV that was burned over on this fire. There are no injuries. Ranger is going to contact Forest Fire Staff and Forest Supervisor to advise them. He will likely request a Forest Team to review this fire."*

When is it appropriate to use cell phones instead of the radio when trying to communicate **your situation?** 4

What is **YOUR** notification process during an incident within an incident that does not involve injuries? What about off unit resources and notifications to their home unit?

Lessons Learned

"I was trying to mitigate what was unsafe as fast as the situations developed, than deal with the fire later, I was doing what I had to do to stay safe."

~Joe

"I had my fill of the fire being that close to us. Our lives are more important than a piece of equipment that can be replaced."

~Chester

✓ As the events unfolded all fire management personnel involved in the incident kept calm and made solid decisions to keep them as safe as possible

✓ Communications from Joe to Mike as events unfolded were concise and clearly painted a good picture of the situation

✓ Keeping physically fit prior to the incident helped Joe and Chester evacuate from the location quickly on foot

✓ Firefighter safety is more important than saving equipment and personnel recognized when it was time to abandon the UTV for personnel safety. *"Firefighters over equipment"*

✓ Instead of parking the UTV, keep it moving during burnout operation with the pump running

✓ Consider a UTV that is equipped with water and pump unit just like an engine

✓ Trusting the leadership of those who have more experience is the difference between getting to a safe location or getting burned for a new firefighter

✓ Local notification processes need clarification in order to help firefighters on the ground in times of unexpected outcomes

"Use the equipment you have."

~Mike

"When you have little experience, you have got to trust the decisions of those who do have the experience."

~Chester

What is in your in-briefing? Does it cover notification processes and is it standard across **YOUR** unit?

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