

Rapid Lesson Sharing

Event Type: IA Engine Burn Damage

Date: June 27, 2018

Location: Black Mountain, North of Cedar City, Utah

NARRATIVE

On June 27, 2018 a vehicle rollover on Highway 130 ignited a wildfire approximately 30 miles North of Cedar City, Utah.

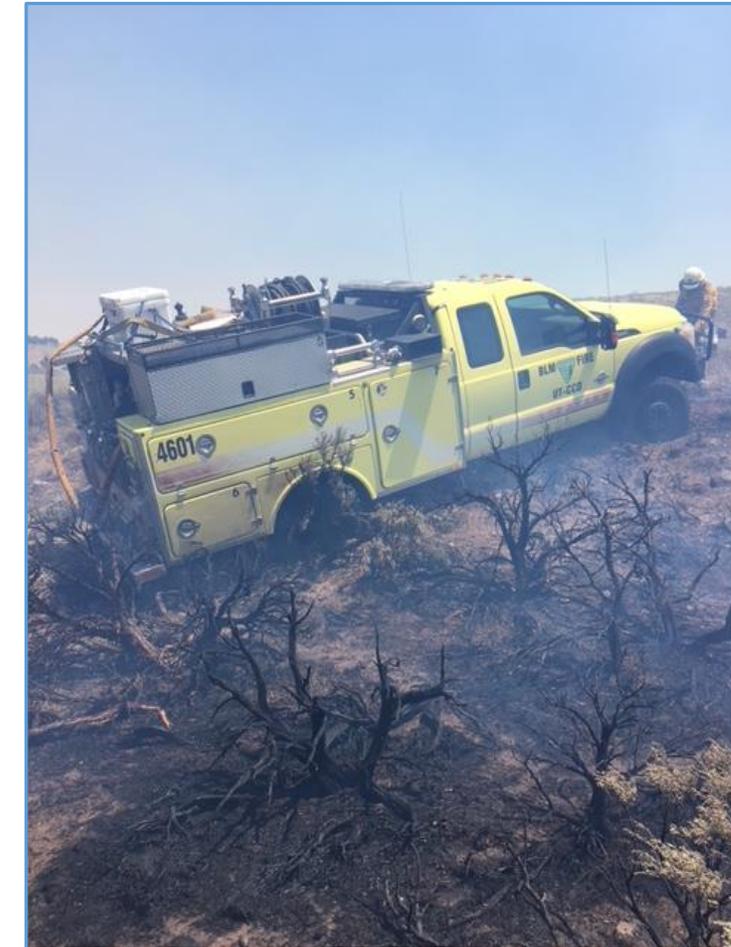
At approximately 1330 hours, Engine 4601 was dispatched to the fire and arrived on scene at 1400.

After being unable to contact Dispatch or the IC on the fire, the Engine Boss determined to suppress the fire using mobile attack, anchoring off of the highway.

Suppressing the fire was successful for the first 50 feet. But during this mobile attack the engine hit a rock, temporarily high-centering the vehicle. At the same time, it was also noticed that the oil pan was damaged.

As this backing fire approached the rear of the stuck engine it was noted that the engine was out of water. The VFDs therefore suppressed the fire near the engine. At the same time, more attempts were made to pull the engine to the highway.

An Engine Protection Line (EPL) was deployed to extinguish any fire threat near the vicinity of the engine. After the fire threat was mitigated, it was determined that even though the engine was losing oil, it was still operable.



The engine attempted to retreat the 50 feet back to the highway—before the engine lost all of its oil.

Engine Becomes Stuck on Incline; Loses All Oil

During this egress back to the highway, the engine encountered the shoulder of the highway with a moderate slope. After the third unsuccessful attempt to scale this hill, the engine lost all of its oil. The truck went into limp mode, paralyzing the engine on the incline.

At approximately 1415, the engine crew along with several volunteer fire departments (VFDs) now on scene tried to pull and winch the truck back onto the highway. However, due to its size and mechanical issues with the winch, the vehicle remained stuck on the incline.

At this time, the fire behavior was the same, a three-to-four-foot backing fire.

As this backing fire approached the rear of the stuck engine it was noted that the engine was out of water. The VFDs therefore suppressed the fire near the engine. At the same time, more attempts were made to pull the engine to the highway.

The suppression action beside the engine created a strip of unburned fuel on one side of the engine.

The backing fire moved approximately 30 feet past the incapacitated engine. Next, the wind shifted and turned the backing fire—now burning past the engine—into a head fire in the unburned strip, moving into the path of the incapacitated engine.

The flame lengths were eight to ten feet. Within 30 seconds, the flames were at the engine. All personnel involved in attempting to extract the truck quickly retreated to other side of the highway. The VFDs continued to spray the stuck engine.

Just as quickly as the fire had fire erupted, it quickly passed the truck. Everyone returned to the scene to extinguish any fire near the vicinity of the engine.

While the engine didn't catch on fire, it did receive significant heat that caused scorching and the plastic trim to melt.

Next, the IC and Operations drove by and were apprised of the situation. The VFD water tender sprayed the vehicle and the surrounding area. The water tender also pulled the engine back onto the highway.

Chronology

- 1330** – Engine 4601 dispatched to the fire.
- 1400** – Engine 4601 arrived on scene.
- 1410** – Engine 4601 high centered/oil pan damaged.
- 1415** – Towing operation on shoulder of highway.
- 1420** – Fire behavior switches from backing fire to a head fire.
- 1430** – Engine 4601 towed back onto highway.

Factors Involved

- ❖ Fuel Type: Cheat grass and sagebrush.
- ❖ Multiple fire incidents in the area.
- ❖ Radio traffic for several incidents were concurrent and consistent.
- ❖ Limited resources due to other fire activity in the area.

LESSONS

- ✓ Practice all elements of Engine Protection regularly.
- ✓ If engine is incapacitated, fully commit to protection tactics including burning around the engine and using the Engine Protection Line.
- ✓ Whenever possible, place your engine in black or create and ensure that more defensible space is feasible.

This RLS was submitted by:

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