Rapid Lesson Sharing

Event Type: Leaf Blower Fuel Geyser

Date: Nov. 7, 2016

Location: Maple Springs Fire, North Carolina

After the fuel geyser igniting event—that jeopardized three firefighters and various equipment—this is all that was left of the leaf blower.

FF #2 then proceeded to open the leaf blower fuel tank's cap. This caused a geyser of fuel to erupt from the leaf blower onto the equipment—and onto FF #2.

NARRATIVE

A hand crew is working direct line using a leaf blower to clear leaves off the line.

Using a Stihl BR550 leaf blower, the crew had been running hard for approximately two hours and were about fifty feet from tying into a dozer line. Weather temperature is in the high 70s. The crew had filled the tank once during the two-hour run of line construction with fuel that was acquired two days previous.

Around 1400 hours, working in steep terrain, when the leaf blower operator (FF #1) would lean forward, the equipment would throttle down and almost die. Assuming this was due to a low fuel level, a second crewmember (FF #2) grabbed the Dolmar to refuel the leaf blower.

When the leaf blower geysered, it ignited the Dolmar and the leaf blower (still on the back of FF #1) and FF #2.

Attempted to Refuel the Leaf Blower with it on the Operator's Back

Feeling like productivity would be greater if they filled the leaf blower while it remained on the operator's back, FF #2 opened the Dolmar and handed the cap to the leaf blower operator. FF #2 then proceeded to open the leaf blower fuel tank's cap. This caused a geyser of fuel to erupt from the leaf blower onto the equipment—and onto FF #2.

This refueling operation was taking place approximately eight feet off the active fire line. When the leaf blower geysered, it ignited the Dolmar and the leaf blower (still on the back of FF #1) and FF #2.

The terrain where this fuel geyser event occurred.

Firefighter Sees: *"A Fireball and FF #2 on Fire"*

To avoid throwing the burning Dolmar toward the other nearby crewmembers, FF #2 moved to the left side of the leaf blower operator. FF #3, located downhill of this refueling operation, looked up to see: *"a fireball and FF#2 on fire."* He hollered at FF#2 to: *"Stop, Drop and Roll!"*

At this point, the Dolmar—now fully on fire—was dropped. Due to the steep terrain, it started to roll downhill toward FF #3. This rolling action caused ignited fuel to spew out onto FF #3—and catch him on fire, too.

FF #3 immediately stopped and rolled.

Due to the extremely steep terrain, FF #2 was hesitant to drop and roll. By this time, his lower legs were fairly well engulfed in flame.

FF #1, the leaf blower operator, managed to drop onto his back as soon as the equipment ignited. Due to the steep terrain, this action allowed him to easily slip free of the burning equipment. He therefore sustained no injuries.

The leaf blower machine, on fire, started to roll down the hill.

FF #3, able to successfully extinguish the flames on his Nomex, moved upslope to pat out the flames on FF #2. As he moved to extinguish the flames on his fellow firefighter, FF #3, a qualified EMT, was rapidly thinking ahead of possible scenarios of burn injuries and how to manage the burns.

Much to his surprise—and pleasure—he discovered that none of the three firefighters sustained any burn injuries. However, the leaf blower, the Dolmar, a handheld radio, and a hardhat were burned entirely.

LESSONS

✓ FF #2 was wearing all-cotton long-johns under his Kevlar Nomex pants and shirt. He believes that this contributed to his lack of burn injuries—his Nomex shows burn patterns.

✓ All crew members had on their proper PPE.

✓ Crews expressed that future operations will involve: taking the leaf blower off their backs when refueling; refueling at least 30-50 feet from the active fireline; placing their gloved hands over the cap as they release it; and allowing for the equipment (specifically the fuel tank) to cool down before refilling.

This RLS was submitted by:

The Region 8 Safety Liaison Team

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