

Rapid Lesson Sharing

Event Type: Chainsaw Cut

Date: Aug. 26, 2016

Location: Broadway Fire, Wyoming



The sawyer's left leg was contacted with the bar and chain one half-inch above the top of his leather boots and one half-inch below his chaps.

NARRATIVE

Sawyer and swamper sized up an 11-inch, 30-foot tall dead lodgepole pine in the road buffer that was to be cleared for fire suppression operations. Tree lean and desired falling area was established. The sawyer and swamper discussed the felling procedure based on tree location, lean, size, and health.

It was established that a quarter-cut style felling cut would be used to fell the tree. Because the tree was very light in weight and short in stature, it was also established that the cuts would be placed very low on the tree and executed from the kneeling position. (Therefore, for all cuts made to this tree, the sawyer's right leg was kneeled and left leg was upright. See photos on left.)

After confirmation between sawyer and swamper, the felling procedure was initiated. The sawyer put in his face-cut from the "on" side of cutting (what would be the left side if you were looking at the tree from the tree's desired falling lay). After the pie of the face-cut was taken out, the sawyer then took the "guts" of the tree (removing the holding wood in the middle of the cut, but leaving the corner posts of the holding wood intact).

These two photos are reenactments to illustrate the sawyer's position when he made his cuts into this tree.



Taking the guts of a tree is a technique used to reduce exposure when a tree has little weight, either because it is dead or short in height. This tree had both.

Tree Refuses to Fall

The sawyer then initiated his back-cut as part of the quarter cut procedure by taking out half of the material of the entire back-cut from his “off” side (what would be the right side of the tree if you were looking at the tree from its desired falling lay). After this first half of the back-cut was executed, the sawyer removed himself from that side of the tree and the swamper placed a wedge in the kerf of the back-cut for protection.



This is the wedge that the sawyer’s saw made contact with causing the kick-back injury during felling operations.

After the wedge was set and pounded by the swamper, the sawyer initiated the remaining half of the back-cut. The sawyer continued removing material from the back-cut until only the desired width of holding wood remained. The swamper then placed a second wedge in the second half of the back-cut just executed, about three inches in from the edge of the tree, angling toward the center of the tree.

Even when the swamper pounded on this recently placed wedge, the tree still did not fully commit to its fall. Next, the swamper alternated pounding on both wedges placed in the tree—but the tree would not commit.

He immediately stopped the saw, set it on the ground, lifted his pants, and saw three cuts made to the inside shin area of his left leg.

Saw Tip Contacts Wedge—Kicks Back Into Sawyer

Given the tree not wanting to fall, it was quickly discussed between sawyer and swamper that the sawyer would try to cut or “nip” a bit more of the holding wood from the “on” side of the back-cut. Dropping to a knee again, the sawyer started the saw and initiated the procedure to take some of the remaining holding wood on the corner between the edge of the tree and the placed wedge.

With the saw revved up to operating speed, the bar was slowly brought toward the wood to be removed. After a moment of cutting some of the desired holding wood, the tip of the saw bar contacted the placed wedge and kicked back toward the sawyer. The sawyer’s left leg was contacted with the bar and chain one half-inch above the top of his leather boots and one half-inch below his chaps.

The chaps worn by the sawyer were in full compliance with agency and Forest saw policy. It was the cocked nature of the sawyer’s left leg in the kneeling position that caused the chaps to ride up and shift slightly to the left (outside) of the leg.

Three Cuts Made to Sawyer’s Left Leg

Upon contact of the chain/bar to the sawyer’s leg, both the sawyer and swamper looked down to see if the chaps were struck. There appeared to be no cuts or Kevlar pulled from the chaps. The sawyer then noticed a two-inch wide cut made to his pants. He immediately stopped the saw, set it on the ground, lifted his pants, and saw three cuts made to the inside shin area of his left leg.

The crew EMT quickly put on latex gloves, unpackaged the Israeli Bandage and applied the dressing to the sawyer while all the while communicating patient condition and other pertinent information to a scribe—as required by the incident’s 9-Line medical form.

The sawyer immediately compressed the wound with his gloved hand. The swamper shouted at a nearby crew EMT to respond with a ten-man medical kit. The EMT promptly responded and asked the sawyer: “Where is your Israeli Bandage?”

The sawyer replied that it was in his pack. The crew EMT quickly put on latex gloves, unpackaged the Israeli Bandage and applied the dressing to the sawyer while all the while communicating patient condition and other pertinent information to a scribe—as required by the incident’s 9-Line medical form.

The time from impact of saw to when the patient was bandaged and transferred to the Crew Superintendent’s truck for transport was approximately five minutes. As previously mentioned, the sawyer received three lacerations to the inside of his left shin. He was transported to the hospital non-emergent, received 17 stitches, and was released back to duty shortly thereafter.



Israeli Bandage

The Israeli Bandage is a specially designed first-aid device that is used to stop bleeding from hemorrhagic wounds caused by traumatic injuries in pre-hospital emergency situations. The bandage was invented by an Israeli military medic, Bernard Bar-Natan. The bandages were nicknamed “Israeli Bandage” by American soldiers and have been “the bandages of choice” for the U.S. Army and Special Forces.

LESSONS

Perceived “Time Crunch”

A challenge faced by the sawyer and swamper that contributed to this incident was a perception by this saw team that they needed to produce/cut faster than the fire situation actually dictated. This perceived “time crunch” during the cutting operation contributed to the sawyer/swamper’s selection of strategy and tactics while commencing cutting/felling operations.

A lesson learned from this experience is to match your *perceived* reality to *actual* reality. In other words, take a moment to evaluate the task at hand and its true urgency in relation to the overall incident objectives at *any* level within the chain of command.

The sawyer/swamper’s selection of a cutting procedure from the kneeled position was utilized in this instance to gain an advantage against the perceived time crunch. While cutting from the kneeled position is advantageous in many situations when felling trees, in this situation it resulted in an undesired outcome.

Positive Medical Outcome

The overall success of this incident was the immediate and effective medical care given to the patient. The crew medical personnel had the knowledge, training, experience, and supplies to address the situation in accordance with incident-issued medical direction and documentation.

In crew discussion after the incident, it was noted that the effectiveness of the Israeli Bandage, utilized in this situation from the sawyer's pack, should be shared by all members of the crew—not just primarily limited to sawyers.

The overall crew medical training, proficiency scenarios, and acquisition of job-appropriate medical supplies carried by sawyers of this crew undoubtedly contributed to the overall positive medical outcome of this situation.

This RLS was submitted by:
Crew Leader

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