SHARP
Safety & Health Assessment & Research for Prevention

Near Miss Alert

Tether Line Break

Tether Line Breaks after Moving Base Machine

Incident

An operator with over 15 years of experience on a feller buncher and 4 months on a tether machine had a close call when one line of a dual line tether system broke after relocating the base machine.

After finishing cutting a strip, the operator needed to relocate the base machine. There was a processor operator working near the base machine who was an experienced machine operator. The tether operator thought it would be easier to have the processor operator relocate the base machine.

The processor operator had run an excavator before but had never used or been trained to operate one set up as a base a machine for a tether system.

When he relocated the base machine, he reeled the lines in close to the sheave. He had the tension set for normal operations on the drums. While he was digging in the bucket, the poured socket on one line was caught on the edge of the sheave frame, damaging the line at the termination point. The other line was reeled out further and was not damaged.

After he relocated the base machine and dug in the bucket, he notified the tether operator to begin working. The lines were in lead with both machines without any side wash.

The tether operator did not inspect the connections before starting work.

The operator travelled approximately 60 feet to the steepest location on the hill where the slope was over 80%. He had not yet started falling and was positioned not far downslope from the base machine. Just then, the no tension alarm sounded. The alarm is audible and visual.

Once triggered, the system allows half a wrap on the drum to be released while the drum brakes are being applied. The drum brake applies slowly to avoid shock loading the system. All safety systems worked as designed.

The operator spun the machine around and saw that one line was laying broken on the ground. The line did not recoil uphill, but laid flat on the hill. The operator said he would not have known that the break had occurred if the alarms had not sounded.

The operator made sure the machine was secured on the hillside and went out to investigate. The line broke 2 inches from the poured socket. The other line was undamaged.

He got the machine up the hill, reported the incident, and made repairs. He cut the line back to where there was no damage and poured a new socket using all new components.

Base machine used on day of incident.

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FACE Washington Fatality Assessment & Control Evaluation

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Recommendations

- Bevel the edges on the sheave.
- Reduce line tension to as low as possible when relocating base machine.
- Inspect connections after relocating or transporting the base machine.
- Check location of poured knobs or eyes before moving base machine to ensure that they will not rub against sheaves, machine, or other objects.
- Train operators on proper procedures for relocating the base machine and inspecting equipment.
- Do not allow untrained employees to operate equipment, unless under direct supervision of a trained operator.
- Have a secondary stopping device when working on steep slopes.

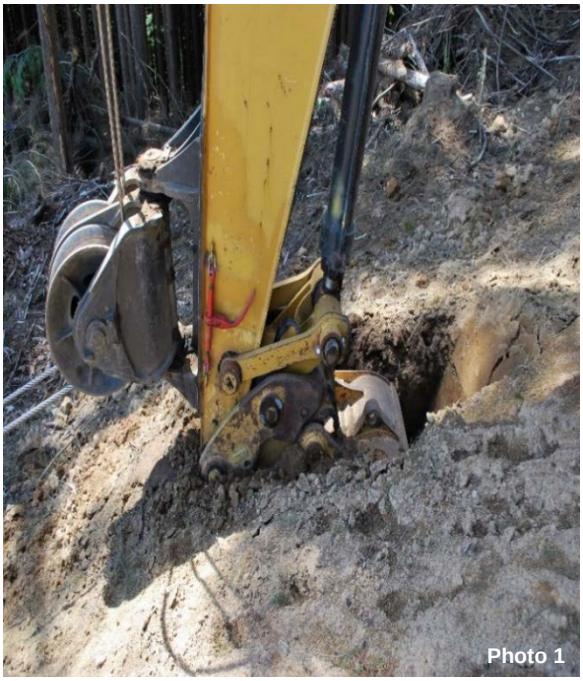
Photo 1

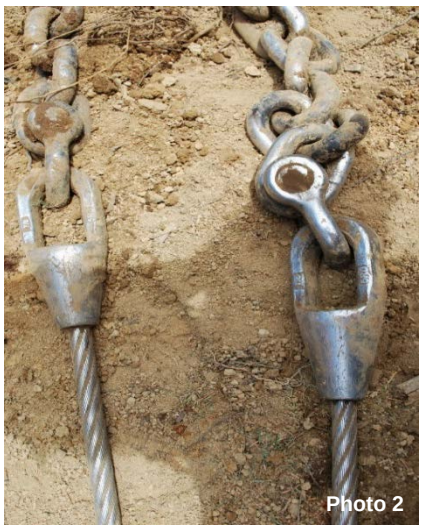
Photo 2


Photo 3

* Photos 2 and 3 are not from the actual incident

Photo 1. Base machine bucket dug in.
Photo 2. Poured socket connections like those involved in the incident.
Photo 3. Socket showing pitting, which may indicate internal damage. Sockets with pitting should be removed from service and replaced.

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