Hancock Forest Management

9 November 2015

SAFETY ALERT

Broken Tether Rope

Background

Unbeknown to the operator the ropes of a twin drum cable-assist machine crossed over one another in front of a stump. The machine began to in-haul and, under tension, one of the winch ropes broke at the ferrule.

Neither the tether nor the harvesting machine lost its footing.

No one was injured.

Contributing factors:

The ropes crossed below a tree stump and outside of the operator's line of sight.

The height of the stump was within specification for the terrain.

Crossed over ropes are not unusual and whether the operator had noticed the crossover or not he would have most likely have kept an eye on them but allowed them to correct themselves.

Learnings:

- The rope may have broken from any one or combination of: 1) wear on areas in contact with a sheave; 2) fatigue from repeated bending; 3) mechanical abuse (crushed/cut).
- When an operator observes a crossed over rope they need to pay particular attention to the friction points and ensure they correct themselves promptly and prior to meeting a join (ie at a ferrule).
- Owners and operators must ensure that there are systems to periodically and thoroughly inspect, report, and control wear and damage for all parts of the cable assist system.
- You are especially encouraged to regularly inspect for fatigue or broken wires around termination points (ie ferrules, shackles, etc.).
- All rigging management systems should include clear directions and controls that operators can follow when inspecting rigging ie discard when three or more broken wires are found in close proximity of a termination point.
- Record all broken wires in a daily rigging examination workbook.

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- If at any time a change in the rope condition is suspected it should be reported immediately and the equipment taken out of service until the rope has been examined by a competent person.
- The fact that neither machine broke free, slid or rolled re-affirms that the system was working optimally. It was within its safe working window and assisting, not guaranteeing, the stability of the harvesting and extraction operation.