

SAFETY ALERT



WINCH-ASSIST ROPE BREAKS

What Happened?

Operator butting of windblow on T-winch on ridge. slope was relatively steep 25°-35°, was placing trees on ridge below the T-winch, operator had just brought a grapple full of trees up and was walking away from T-winch with 7-ton online pull when rope broke, the machine slid 5-10 m and stopped against a root ball, when rope broke he was only 15 m away from winch. He notified crew and walked the other winch down to pull machine back onto ridge and rope was inspected and termination point replaced.

Forestry industry investigations and rope integrity reviews have identified that winch-assist rope failures are commonly the result of accumulated damage rather than a single event. Heat, fatigue, abrasion, excessive deflection, shock loading and poor inspection practices can progressively weaken a rope until sudden failure occurs.

KEY CONTRIBUTING FACTORS

- Heat build-up from repeated loading, friction and poor rope routing.
- Increased deflection around stumps, logs and terrain features.
- Excessive machine movement while connected to the winch system.
- Shock loading from sudden tension changes or snagging.
- Poor pre-use inspections and delayed rope replacement.
- Abrasion, crushing and internal strand damage.

WARNING SIGNS

- ☒ Broken wires
- ☒ Bird-caging
- ☒ Kinks, twists or crushing
- ☒ Heat discoloration or lubrication oozing from rope
- ☒ Excessive abrasion or wear
- ☒ Reduced rope diameter
- ☒ Damaged terminations
- ☒ Evidence of shock loading

REQUIRED ACTIONS

- ✓ Inspect the rope termination points and wear before every shift (first 50m highest risk of damage). Inspect rope regularly at service and maintenance intervals



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- ✓ Keep rope lead as straight as practicable. When using stumps inspect for heat and significant deflection causing rope wear
- ✓ Stop work and remove damaged ropes from service. OFO requires rope replacement before 1500 hours of use.
- ✓ If any rope is shock loaded, walked over, been binding on sharp edges or other situations that could cause rope damage “stop”, inspect, and ensure rope is in safe condition to continue use.
- ✓ Increase inspection frequency and winch system maintenance when working short high activity areas or increased movement where rope loading may occur.



KEY MESSAGE

EVERY WINCH-ASSIST ROPE BREAK IS PRECEDED BY DAMAGE

Heat + Deflection + Fatigue + Shock Loading + Poor Inspection = Increased Risk of Failure. Inspect It. Protect It. Replace It Before It Fails.

HOME SAFE AND WELL

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