



INDUSTRY

SAFETY ALERT

Log Loader Cab Tilt System Fails on Multiple Occasions

Oct. 24/22: The cab on a Tigercat 875 log loader was being lowered to change the front window and was partially down when it unexpectedly free-fell. The cylinder and emergency cable prevented the cab from hitting the track. However, there was a worker who had walked below the cab just before it fell.

The cylinder was replaced, and the cable had no apparent visible damage.

Oct. 31/22: A field mechanic was topping up the fluid level for the cab tilt system on the same log loader prior to lowering the cab for a window repair.

The cylinder for the tilt system had recently been changed due to a cab tilting failure, but the system had not been fully tested.

The mechanic moved the cab to the tipping point and back and filled the reservoir to the appropriate level. Satisfied with that result, he moved the cab to the tipping point and again jogged it beyond. The cab unexpectedly free-fell from that position, breaking the cylinder rod *and* emergency cable before coming to rest on the track.

Further investigation revealed that the counterbalance valve was broken which likely was the cause of the original failure. There were 20899 machine hours on this unit.

In the past 11 months there have been four occurrences at K&D Logging of the cab tilt cylinder system failing on tracked log loaders:

1. Cylinder rod breakage. 17438 hours Tigercat 880C
2. Eye of the cylinder rod end pulled off the rod, 9500 hours Tigercat 880D
3. Suspected internal failure of the cylinder, (resulted in a close call with an operator walking past). 20899 hours Tigercat 875
4. Component failure and breakage of both the cylinder rod *and* the emergency cable breaking, resulting in the cab hinging down to the track. 20950 hours (approx.) Tigercat 875



BC Forest Safety

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Failed Counterbalance Valve



Counterbalance Block



Initial cab tilt cylinder failure due to counterbalance valve



Replaced cab tilt cylinder failure



Emergency cable failure after cab free-fall





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Learnings, Recommendations and Actions:

- Only trained and qualified individuals should be lowering or raising machine operator cabs.
- Fully inspect all components of the system prior to operating. Pay close attention to cables, pins, mounting points and hoses especially in a system failure event.
- Ensure all fluid levels are optimal
- Ensure that all is clear and nobody - including yourself - is in the bight.
- If any components have been replaced, attach a secondary safety chain in order to prevent unexpected free-falling of the cab. Use it in conjunction with the cab lift system until that system has been fully tested and deemed safe to operate.
- Ensure that all the cab lockdown bolts are replaced and tightened prior to moving and/or full operation of the machine.

Submitted by:



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