

# Safety Alert

Stem entering processor cab

30<sup>th</sup> May 2019



## Background

- A hauler crew was shovelling wood away from the hauler, downhill towards a landing where the processor was positioned.
- They were running two stockpiles, one where the processor was and another stockpile on the hill, midway between the hauler and the processor.
- To mitigate the risk of a runaway stem, they rigged up the winch-assisted felling machine to shovel the wood away from the hauler and down the hill, instead of “throwing” the wood down the hill towards the processor.
- The two stockpiles were situated at different angles to combat the possibility of a runaway stem heading towards the processor.





## What happened

- The processor had a breakdown and the operator had to change a hydraulic hose. While the processor was away, the other machine continued shovelling wood, creating a substantial stack that was as high as the cab door.
- The processor came back and the shovelling machine (felling machine) left to do some falling in another part of the block. There were no other machines working the face above the processor at the time of the incident.
- The processor operator was cutting up wood, when a stem dislodged itself from the first stockpile, the stem hit some of the heads in the stockpile that the processor was working on, this managed to turn the stem and it went in the direction of the processor.
- The stem went in-between the lift rams, past the boom and had enough force to destroy the operator protective structure and partially entered the cab. It struck the operator on the right arm, thankfully the velocity was reduced, and the operator only suffered bruising.
- The stem hit with such force that it bent both lifting rams.





## Lessons learned

- The crew performed an operation that they have successfully undertaken before and is not uncommon in harvesting operations, they initially mitigated the risk by ensuring that the stockpiles changed direction to the processor and used the winch-assisted machine to shovel and place stems and to feed the processor.
- The hauler was due to shift the same day and they had identified an area of gentler slope that would become the “chute” down to the processor.
- The runaway tree managed to get up to the height of the cab due to the height of the stockpile next to the processor.
- The shovelling machine should have stopped feeding wood to the processor stockpile after the processor had a breakdown.
- The processor was working right next to and slightly underneath the stockpile.
- The operator protective structure performed as it should have and saved the operator from significant harm.
- Although this machine has current and valid OPS, FOPS and ROPS protection, the escape hatch is unprotected and was exposed to the hazard every time the processor turned away from the stockpile to place wood in his cut-pile.



## Recommendations

- Retrofit a guard on the escape hatch that can be opened from inside the cab and from outside the cab. All machines performing a task where there is a potential for a log to enter the escape hatch, should have adequate protection fitted.
- Avoid working under stockpiles.
- Always move machines to safe areas to perform maintenance.
- Don't presume that stems are stable, and they won't move.
- Install higher lift ram guards:



After this incident, the contractor has decided to modify the lift ram guards on his machines. He will be increasing the height of the lift ram guards and this will assist in deflecting a stem to reduce the chance of a repeat incident.

**This incident resulted in machine damage exceeding \$50k, but thankfully the operator walked away with a bruised arm. Operator protective structures are effective if they are certified and inspected annually. Ensure that protective structures are re-certified after major structural damage.**

**Although operator protective structures are effective, the operator should not be over confident and believe that they can't be injured inside the cab. Always position your machine as safely as possible and don't hesitate to stop the operation when you feel at risk.**