

# Timber Harvester Operator Killed Following a Chain Shot Incident



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## SUMMARY

On August 12, 2010, a 47-year-old timber harvester operator, employed by a logging company, was fatally injured when he was struck in the neck by a broken saw chain link while processing a Douglas-fir tree and the cutting chain experienced chain shot. Chain shot is the high velocity separation and ejection of a piece or pieces of cutting chain from the end of a broken chain.

The operator was using a Timberjack harvester equipped with a Timberjack cutting head to thin a stand of trees. Prior to the chain shot incident, the operator used the harvester to cut the Douglas-fir stem and move it to the left side of the operator's station for processing. When the operator started the cut-off saw to cut the tree into shorter lengths, the chain broke. It is believed by the employer and DOSH inspector, that when a portion of the broken chain hit a snow hole on the cutting head, chain shot occurred. Three pieces from the chain struck the operator's cab. One of the pieces penetrated the 12 millimeter (approximately 1/2 inch) polycarbonate window made by Lexan and struck the operator in the neck. The injured operator contacted a co-worker in the area, who contacted emergency responders and the employer. The harvester operator was pronounced dead on the scene.

Most experts agree that the risk of chain shot cannot be completely eliminated. However, to prevent similar incidents the Washington State Fatality and Control Evaluation (FACE) team recommends several preventive measures that employers, harvester operators, employees on foot, and manufacturers can take to greatly reduce the risk.

Employers:

- **Should create maintenance and guarding systems that reduce the chance of chain shot and protect workers.**
- **Train all workers who might encounter chain shot on standard operating procedures (SOPs) used for the prevention of chain shot.**

Harvester operators:

- **Should whenever possible avoid processing trees when the processing saw is in line with the operator's cab.**

Workers:

- **Should be aware of and in frequent communication with harvester operators regarding their proximity and alignment relative to timber harvesters and the location of safe zones.**

Manufacturers:

- **Should equip mechanized logging equipment with multiple safety systems to prevent chain shot and related injuries.**

To access the full version of this investigation report along with the detailed recommendations and discussions section, go to [www.lni.wa.gov](http://www.lni.wa.gov) and enter **52-30-2014** into the search box.