

INDUSTRY ALERT

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Injury

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Grader tire chain link snaps free, shatters cab window and strikes operator

What happened?

A grader operator was travelling in his machine when a chain link on the right rear tire broke free, shattered the back window of the cab, struck the operator in the back of the head, then struck the front windshield. The operator became disoriented and pulled off the road. He suffered a minor bruise and cut to the back of his head.

Why did it happen?

The company incident investigation report noted that the grader was in good condition and that new chains had been installed approximately a week and a half prior to the incident. Subsequent inspection of the chains showed possible weaknesses in the metal and welding. The back window of the grader cab was not strong enough to withstand the impact of the flying chain link.

How can it be prevented?

Although the chain supplier felt that the chains were not defective, it replaced the cross links on all sets. The incident investigation team also recommended the installation of plexiglass on the back window of the grader to provide more protection to the operator from impact hazards.

While this type of incident is a rare occurrence, employers can assess their general due diligence obligations regarding the protection of mobile machine operators in the cab by noting that Section 26 of the Regulations for Industrial Establishments states that “a machine shall be shielded or guarded so that the product, material being processed or waste stock will not endanger the safety of any worker.” The front window of the cab is usually the focus for extra protection, but this incident shows that impact hazards can come from any direction.

Employers, supervisors and machine operators should bear in mind that plexiglass and even Lexan windows can lose their effectiveness over time. Cab windows should be regularly inspected for signs of wear such as scratches, hairline cracks or yellowing.

Since the set of chains on the grader tires was less than two weeks old, the operator would hardly have expected wear to be an issue with them. This incident nevertheless underlines the value of performing a thorough daily circle check of the machine and its accessories. A circle check may not have immediately identified a problem in the right rear tire chains, but performing the check on a daily basis significantly raises the odds of discovering problems such as this before an incident occurs.

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