



CONTRACTOR SAFETY ALERT

CHAIN SHOT

Number: 116

Issued 27/11/2023

Background

On 27 October, two FPC Officers were walking within an unharvested cell approximately 100 to 150 meters away from a harvesting machine being operated in an adjacent cell when a chain link has shot passed between them, fortunately neither Officer was injured. The FPC Officers were outside the 100m exclusion zone and complied with communication protocols on the work site.

Key Points

- All chain shot guards and catchers must be securely fastened and maintained in good working condition.
- It is recommended that $\frac{3}{4}$ " chains be used in harvesters.
- Polycarbonate sheeting windows must be equipped on all machines fitted with a hydraulic powered saw or disc head. The entire front screen, where impact from chain-shot is the greatest risk, should be minimum 19 mm thickness.
- Side and rear windows should be polycarbonate sheeting 12mm thickness or greater where it is not possible for these screens to be in the direct chain shot zone, while the machine is operating. Where the harvester/processor head position is not restricted to the front of the operator cabin all polycarbonate sheeting should be 19 mm thickness minimum and where it is an available option a greater thickness is preferred, particularly for larger felling/processing heads that have a higher energy potential chain shot.
- Where the risk is assessed as likely that a machine will work within 100 m of an identified chain shot zone they should be equipped with polycarbonate sheeting at least 19 mm thickness.
- Never use the saw with the saw bar directly in line with the cab or other persons. Ensure no one is within the "chain shot cone". Always perform cuts as close to the ground as possible.
- Always follow the manufacturer's recommendations for the operation and maintenance of saw chain based cutting systems, in order to minimise the risk of a cutting system failure:
 - Using high quality chain will reduce the risk of chain shot. Low quality chain can be made from softer steel and have thinner chrome plating causing it to become blunt quicker and increasing the risk of breakage.



- Inspect chain frequently especially after any unusual events for cracks, worn parts, stretch and poor riveting, and remove any damaged chains from service.
- Follow a proper change out schedule to remove worn-out chains from service before they break.
- Use only chain components that meet manufacturer's specifications. Always use new parts when assembling and repairing a saw chain.
- Ensure proper chain tension is maintained, checking it often. Incorrect tension can increase the potential for chain shot.
- Don't repair or use chain that has broken twice, replace it.
- Ensure chain speed does not exceed the chain manufacturer's recommendations. In general, higher chain speeds result in increased wear, shorter service life and increased occurrence of chain breakage and potential injury.

Chain shot cone

