



waratah

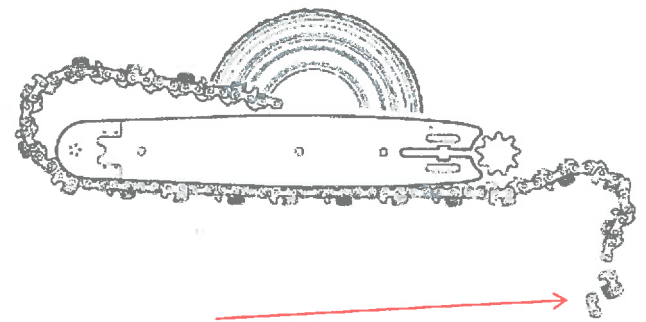
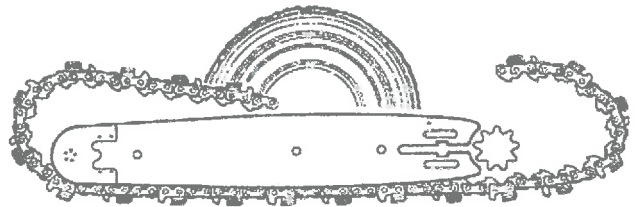
**Chain Shot
Awareness and
Management**

Chain Shot



Chain Shot

- Known to occur when saw chain breaks and loose end whips or changes direction
- 1-3 chain links propelled at high speed as the whip action breaks the chain
- Fit a Chain shot guard to all mechanical chainsaws to minimise the hazard



Chain Shot Guard



- The chain shot guard is designed as a sacrificial component
- Ensure that the guard is inspected regularly and replaced when in poor condition
- Replacement parts available through Waratah Parts.
- Refer to your machine's Component Technical Manual (CTM) for instructions- replacement manuals available through Waratah Parts.



Chain Shot Guard Replacement



Chain Shot Guard

SPECIFICATIONS	
Chain Shot Guard Cap Screw Torque	35 N·m 26 lb.-ft.

CAUTION: Prevent possible injury working in the arm capture zones or the saw bar opening of the harvester head while the hydraulic system is on. Stop the engine. Failure to follow the safety precautions can lead to risk of serious injury.

Chain shot is when a saw chain breaks during sawing and shoots links at high velocity.

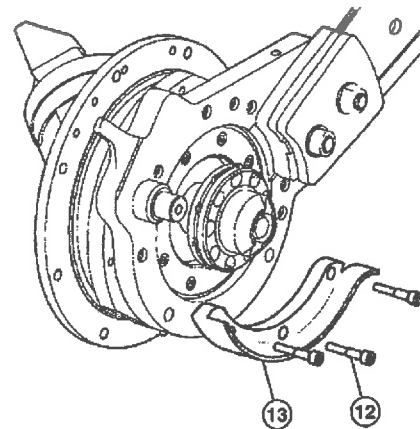
Chain shot occurs around the drive sprocket area. The last 1-3 links are whipped outward toward the back of a harvester head making that area the chain shot danger zone.

To reduce chance of chain shot to a minimum, maintain saw bars and saw chains well and ensure that tensioning & lubrication functions correctly.

To reduce the risk of harm (to an operator) to a minimum, install a chain shot guard in the chain shot danger zone.

1. Insert safety locking pin in tilt up position and lower head to ground.
2. Remove cap screws (12).
3. Fit chain shot guard (13) underneath main saw as illustrated.
4. Replace cap screws. Apply Loctite® 243 (blue) to cap screw thread and tighten. Torque cap screws (12) to specification.

Loctite is a trademark of Henkel Corporation



12— Cap Screw (3 used)

13— Chain Shot Guard

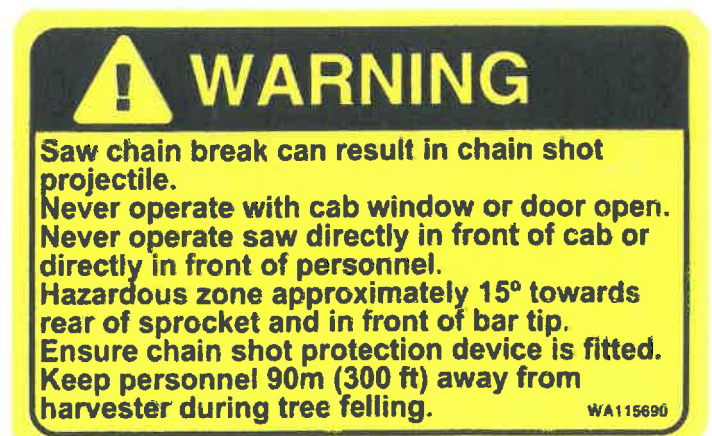
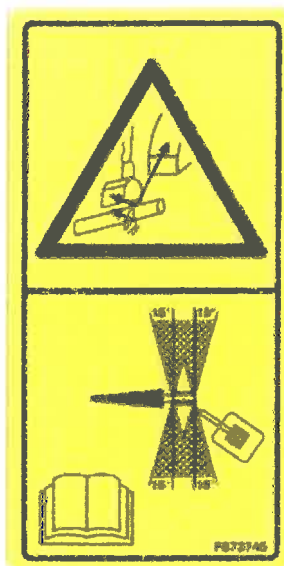
Specification

Chain Shot Guard Cap	
Screws—Torque	35 N·m 26 lb.-ft.

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Chain Shot Warning



Ways to further reduce likelihood of chain breakage



- **Prevent the chain from breaking in the first place**
 - Maintain the whole cutting system not one element of the cutter unit at a time.
 - Avoid fitting new cutter components with worn equipment as this dramatically shortens the life of the new component.
 - Keep chains sharp, maintain correct depth gauge clearance
 - Don't continue to cut with blunt cutter unit or with no lubrication.
 - Check for chain stretch and replace as necessary
 - Repair chains using correct components – replace whole chain after second chain breakage
 - Maintain bar – dress and reverse regularly to balance even wear
 - Monitor wear on sprocket, use the 6 chains, 3 bars, 1 sprocket ratio as a guide for total replacement
 - Ensure correct chain tension through out the operation cycle – auto tension systems provide ultimate chain life and optimum cutting efficiency
 - Ensure adequate lubrication – use good quality, clean bar lube, use clean filling utensils – treat it like you would treat your hydraulic system, keep bar lube holes clean
 - Allow main saws and top saws to warm up before operating – cycle saws six times at low speed – do not allow saw motors to run at speed with no load for longer than 5 sec
 - Maintain correct saw motor RPM and chain speed, bar out speed and bar pressure- refer to your machine's owners manual or contact Waratah for advice
 - Use the Find End when processing- reduces the number of cuts made reducing wear and tear



Ways to reduce the impact of chain shot



Slow or restrict a chain once it breaks

- Utilise chain shot guard
- Operate machine with doors and windows closed
- Avoid processing with saw pointing directly at the cab
- Ensure operator protection meets regional requirements
- Be aware of other workers- take into account other personnel and machines when designing layout of processing deck.



For Further Information Contact Waratah

New Zealand 24/7 Hotline 0800-4-WARATAH

Eastern Australia 24/7 Hotline 03-9747 4200

Western Australia 24/7 Hotline 08-9723-0412

