

## DuPage County Environmental, Safety, Health & Property Loss Control Program Wood Chipper / Shredder Safety

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**Purpose:** Provide safety procedures to be followed when operating a wood/brush chipper.

**Allergic reactions:** if you have severe allergies (such as insect stings) make sure your Supervisor and co-workers know about the allergy and what to do in event you have an allergic reaction. Those with severe allergies to insect stings should consult with their physician about carrying a prescription medical kit.

**Policy:** Never Operate a chipper or shredder under the influence of drugs or alcohol.  
If on medication, check with your health care provider before operating this equipment.

### Preparation:

1. Dress properly for the job, wearing safety shoes/boots, work gloves, hearing protection, approved safety face shields with safety goggles, long pants and shirts, close-fitting clothes. Jewelry should not be worn. If you have long hair, tie it or restrain it with a hairnet. If hair is simply tucked inside a hardhat, it can come loose and get caught in branches going into chipper. Even a long beard can be a hazard in when operating a chipper.
2. Keep bystanders at least 25 feet away from equipment.
3. Fill gasoline tank only while the engine is cold. Don't spill when you fill. If you need to refuel before completing a job, turn off the machine and allow the engine to cool. Never light a match or smoke around gasoline.
4. Read the operator's manual to find out where controls are and what they do.
5. Read the operator's manual for safety instructions.
6. Know how to stop the machine quickly.
7. Do not remove or disable guards or other safety devices.
8. Ensure the hood, enclosing the chipper/shredder knives, is closed and latched before operating. Check for loose or missing pins in the hood latch as well as cracked or worn hinges. If the hood is not properly secured it could fly off and injure or kill someone. The chipper/shredder should never be operated with the hood open.
9. Eliminate tripping hazards by clearing all brush and debris from the front and side of the machine. This will keep operator from tripping and falling into moving parts.

### Operations:


Operate your shredder-grinder on a level surface. Try not to operate the shredder-grinder on a paved or gravel surface. Discharged material may bounce from a hard surface and cause personal injury to the operator or bystanders.

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Be certain no one is in the discharge area when operating your equipment.

1. Start the chipper/shredder at the lowest possible speed and listen for any noise or vibration that could indicate loose or broken part. If heard, turn off the machine and notify your Crew Leader.
2. Never stand on a slope to feed items into the machine.
3. When feeding the chipper stand to the side of the intake hopper, this will reduce the risk of being caught and dragged into the machine. Standing to the side will also make it easier to reach the emergency shut-off in event it is needed.
4. Let go of material as soon as it begins to be pulled into the machine and walk away to avoid being hit or dragged into the chipper by limbs you are feeding.
5. Lay shorter pieces of material on top of longer pieces and feed through the machine
6. Collect small material such as leaves and twigs and put them with the chipped material instead of feeding them through the chipper/shredder.
7. Do Not put face, hands, feet or any part of your body or clothing near the chute, hopper or discharge area.
8. Do not place hands or feet beyond curtain guard with the blade is in operation
9. Use a push stick or brush to load shorter or thorny brush into the chipper
10. If shredder-grinder becomes clogged, jammed or makes an unusual noise, shut the engine off. To avoid injury, make sure all moving parts have come to a complete stop. Rotating blades take time to stop after the engine is off.

Accident Report Chipper Hood Strikes Employee in Stomach
Summary of OSHA Accident Inspection 119960789
An employee turned off a chipper's motor, but did not wait the recommended (by the manufacturer) five minutes before opening the hood to allow the parts to come to a stop. When the employee opened the hood, the flywheel struck the edge of the hood and flung it into the employee's stomach. His intestines were bruised and had to be partially removed.
 <b>Wait for all moving parts to come to a complete stop before opening the hood</b>

11. Disconnect the spark plug wire and tag it or use key to shut off engine, and then remove the key before inspecting the hopper, chute, internal chamber and discharge area. Use only a wooden stick to clear away jammed material.
12. Shredder-grinders are made for use with organic materials only. When feeding materials into the shredder-grinder, be extremely careful not to put pieces of metal, rocks, bottles or nails inside machine.
13. Do not allow shredded material to build up in or clog the discharge area – clogging prevents proper discharge of materials and can result in kickback of material.

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14. Do not overreach when feeding material into the shredder-grinder. Keep proper footing and balance at all times.
15. Exercise care when chipping dead or frozen wood in order to prevent kickback.

### PTO Safety-if equipped:

A rotating PTO shaft can quickly catch your clothing or hair and wrap your body around the shaft.

1. Never operate without the PTO safety shields in place
2. Ensure the shaft is secured to the tractor
3. Keep all bystanders away from operations
4. Keep hands, feet, hair and clothing away from shaft
5. Walk around PTO shaft, never step over it
6. Never inspect, service, lubricate or adjust the PTO unless it is disengaged from the tractor or the tractors engine is shut off and the shaft has stopped rotating

#### Did You Know?



A PTO shaft rotating at 540 rpm can wrap about 424 feet of string in one minute. This means that it would take a person 6 feet tall, **less than 1 second to become entangled.**



Becoming entangled in the shaft can cause suffocation or amputation of limbs. It can also cause clothing to be torn from your body resulting in second-degree burns and/or severe cuts in your skin.

### Transportation and Traffic:

1. If operated near a roadway follow Highway's requirements for reflective outerwear, warning signs etc.
2. Ensure the discharge shut is pointed away from the roadway.
3. Do not transport or move the grinder/chipper equipment while engine is running.
4. No person shall stand or sit on any part of the chipper while it is in operation or being transported.
5. The chipper apron should be secured in the "up" position while being transported.
6. When towing be sure to connect the safety hitch chains and tighten and secure trailer hitch bolts. Rotate the chipper/shredder chute in the direction where it will not strike objects along the roadway.

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7. Only tow at manufacturer's recommended speeds.

### Operator's Foot Amputated in Chipper

Summary of OSHA Accident Inspection 100746346

The operator of a chipper was feeding small branches with his foot. The foot became caught in the in feed rollers and was pulled into the chipper. His right foot and ankle were amputated.



**Never feed material any part of your body. Always use a push stick.**

### Accident Report Employee Loses Hand in Chipper

Summary of OSHA Accident Inspection 125903088

An employee was operating a chipper that became jammed. He climbed on top of the chipper and unfastened the hood. His hand slipped into the rotating blades and was cut off at the wrist.

