

OUTDOOR POWER EQUIPMENT SAFETY

(For assistance, please contact EHS at (402) 472-4925, or visit our web site at <http://ehs.unl.edu/>)

This SOP provides guidance on the safe use of common outdoor power equipment used in landscaping and agricultural operations. As with any equipment or tools, the most basic premise for safe operation is reading and adhering to the manufacturer's instructions and warnings. This SOP is not a substitute for the owner's manual produced by the manufacturer.

Mowers

Operator Protection

- Clothing protects the mower operator from thrown objects and sun exposure. Dress properly for the job, wearing sturdy, non-slip, closed-toe shoes, long pants, and close-fitting clothes. Tie back long hair and don't wear anything that could become entangled in the moving parts of the mower. Always wear sturdy, non-slip soled shoes or boots.
- Safety glasses or goggles protect the eyes from dust, dirt, trash, and small rocks thrown by the blade.
- Earplugs protect hearing from engine and blade noises.
- Protect hands when handling blades and other items which might be sharp, contain nicks, or have metal burrs on the edges. Gloves may also help to reduce vibration to the hands and arms.
- Shut off the engine and remove the battery cable or spark plug wire when making repairs or adjustments to the blades.

Pre-Operation

- Walk the area and pick up objects before starting the mowing job. Tools, cans, bottles, wire, rocks, sticks, twigs and limbs can be hazardous to the operator, bystanders, and equipment.
- In accordance with the manufacturer's recommendations, conduct checks of belts, safety devices, blades, etc. Replace defective, worn, or damaged parts, particularly blades, belts, and safety interlocks/devices.

Fueling Safety

- Do not overfill the tank, leave room for expansion.
- Do not add fuel if the engine is still hot; let it cool down before fueling.
- Do not fuel near heat sources and open flames. Never light a match or smoke around gasoline.

Keep People at a Safe Distance

- Keep people at a safe distance from the mower while it is running (a minimum of a 60 foot radius).
- Disengage the blades and shut off the engine when approached by anyone.

Operation

- Do not override safety interlocks, switches, or other devices. Use guards, deflectors, and drag shields as designed.
- Do not carry passengers.
- Drive slowly and cautiously. Watch for holes, drains, roots on the ground, and other low-hanging overhead hazards.
- Use extreme care when operating a mower on uneven ground. On riding mowers, decrease your speed when going down a slope or around sharp corners to prevent tipping. Mow across the face of gentle slopes. Do not operate a riding mower on slopes more than fifteen degrees or on wet slopes. Do not operate walk-behind mowers on wet grass, whether flat or sloped.
- Disengage the blade before traveling over gravel or paved surfaces.
- Avoid mowing in reverse gear, or pulling a walk-behind mower with the blades engaged.
- Do not remove the grass catcher or unclog the chute while the motor is running.

Gas Powered String Trimmers and Brush Cutters

Observe those precautions described above for mower safety related to operator protection, pre-operation, fueling, keeping people at a safe distance, and operation. Additional precautions specific to gas powered string trimmers and brush cutters include:

- Consider the use of a face screen in combination with safety glasses and/or goggles to provide a higher level of protection against flying debris.
- Operate while standing upright, not bent over. Adjust the harness and hand grip to suit work positions.
- Keep the trimmer head below waist level.
- Always stand on the proper side of the trimmer while cutting. On a curved shaft unit, the line head rotation is clockwise (cut on the left side.) On a straight shaft unit, the line head rotation is counterclockwise (cut on the right side).
- Bring the engine to operating speed before starting to cut vegetation.
- Do not operate engine faster than needed to effectively cut the vegetation.

Wood Chippers

Improper use of wood chippers can result in serious personal injury. Life threatening injuries with this type of equipment can occur when the operator is pulled into the knives or is struck by the chipper disc hood. Observe those precautions described above for mower safety related to operator protection. Additional precautions specific to wood chippers include:

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Selecting the Work Area

- Select a level and firm surface to stabilize the machine. Position the chipper so that operators do not have to stand on embankments/slopes when feeding material into the machine. The operator should be positioned to the side of the machine where there is ready access to the emergency shut-off
- Keep the area around the wood chipper free of tripping hazards.
- Erect warning signs and barriers as necessary to keep the public a safe distance from work area.
- Ensure the dislodging chute is positioned to prevent chips from being blown in any direction where they can affect co-workers, members of the public, or roadways.

Safety Precautions for Chipper Knives

- Do not work alone when using this equipment.
- Make sure all safety and emergency shut-off devices are tested and determined to be functioning properly before operating the equipment.
- Check the material to be chipped to ensure that it is free from stones, metal, and other foreign objects.
- Load small leaves and twigs directly into the chip truck, not into the hopper. Lay short material on top of long material or use a long branch to push in short material. Feed brush and limbs butt-end first into the in-feed hopper.
- Do not put any body parts (including hands or feet) into the in-feed hopper. Follow the manufacturer's instructions for dealing with any blockages of the machine.
- Remove the engine start key when the machine is left unattended and prior to maintenance activities.

Safety Precautions for Chipper Disc and Drum Hoods

- Inspect wood chippers each working day before startup for defects such as broken or missing hood latches and pins or cracked and worn hinges. Broken, damaged, or missing machine components should be repaired or replaced before the machine is placed in service. Knives must be changed or reversed if damaged or blunt. Knives should be replaced when worn to the minimum size specified by the manufacturer. When new/sharpened knives are fitted, maintain the recommended clearance between the knives and anvil.
- Make sure the hood covering the chipper knives is completely closed and latched according to manufacturer's recommendations before starting the machine. Allow all internal machine parts to come to a complete stop before opening the hood covering the chipper disc or drum.
- Before processing material and unless the manufacturer recommends otherwise, run the machine at the lowest possible speed and listen for noises that might indicate broken or loose machine parts. If unusual noises are detected, shut-down the machine immediately and have it inspected/evaluated/repared by a competent person before placing it back in service.

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