

Chipper-Shredders¹

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Leaves and other vegetation make up a large portion of landfill trash. In recent years, however, legislation has been passed banning leaves, grass clippings and other forms of yard waste from landfills. As of Jan. 1, 1992, Missouri landfills no longer are allowed to accept yard waste. Many municipalities also have enacted restrictions on dumping yard wastes in landfills in an effort to increase their useful life. Adding to disposal difficulties is the ban on burning imposed in some areas.

Composting is one viable alternative for leaves and grass clippings, but it does not work well for brush and small limbs. This problem can be solved by using a chipper-shredder (see Figure 1), which provides an alternative and offers beneficial side effects as well. For further information on composting, see MU publication G06956, Making and Using Compost.

Chipper-shredders reduce brush and small limbs to a size that is easier to handle and which is suitable for composting or for soil covers, which reduce moisture loss and weed growth and add beauty to a landscaped lawn. Shredding leaves and grass clippings also will reduce the time it takes for composted materials to decay.

Chipper-shredders are available in sizes ranging from light-use, electrically powered models to PTO-powered models. Portable units with gasoline engines may be adjusted from shredding leaves to chipping limbs of up to 3 inches in diameter. The speed of processing varies from one brand to the next. The gas-powered versions work better for chipping limbs but have little advantage over electric ones when shredding leaves. All units work best when the materials are dry.

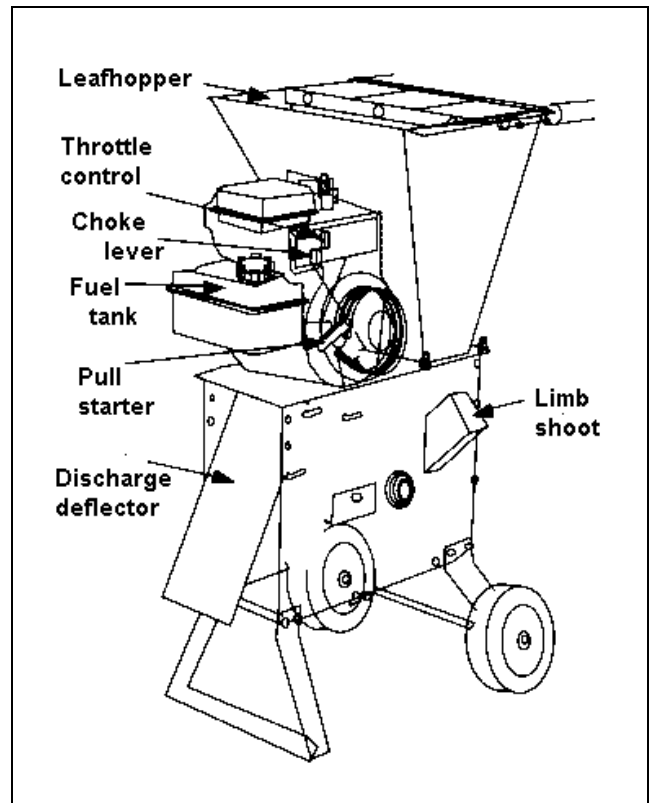


Figure 1.

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SAFETY PRECAUTIONS

Converting unwanted yard wastes into valuable resources is rewarding and can be done safely when a few precautions are followed.

A chute on the side of the unit cuts straight or closely trimmed limbs into flakes 1/2 to 3/4 inches wide by 1/16 inch thick. Leaves to be shredded are stuffed through a top-feed hopper. Leaves can be reduced to one-fourth or one-ninth of their original volume in the process.

When limbs are fed into the chute, pay particular attention to the pulling force the chipper exerts on the limb. Heavy work gloves help prevent cuts if a limb is pulled from your grasp. Gloves also help reduce the effects of limb vibration as limbs are fed into the chute.

During leaf shredding, always use the tamper on the unit. This device pushes leaves into the shredding chamber and stops short of shredding itself. **Never reach into the hopper of a chipper-shredder that is running.**

Eye protection, such as safety goggles, should be worn whenever the chipper-shredder is in operation to protect your eyes from flying chips and "blow-back" from the hopper. Those who use chipper-shredders also should watch for rocks or other objects that could damage the machinery or cause injury. An object propelled at 6 miles an hour is traveling fast enough to dislodge an eye. Always keep bystanders away during operation.

Hearing protection usually is required as well. Noise levels vary depending upon the model and whether it is electric- or gas-powered.

Care and respect must be given to gasoline before, during and after refueling a gasoline engine. Gasoline should be stored in an approved fuel storage can and kept in a cool, well-ventilated area away from open flames. Stop the engine and allow it to cool before refueling. Refuel well away from burning brush piles and preferably downhill from any flames. Do not smoke during refueling. Return the fuel can to storage immediately after refueling.

When using an electrically powered appliance outdoors, power should come from an outlet equipped with a ground fault interrupter (GFI). The GFI is designed to immediately stop the electrical current when it senses a short in the system, such as the operator receiving a shock. Make sure all extension cords are the three-prong grounded type that maintains an extra ground in the event of appliance wiring failure.

An additional selection criteria for cords is sizing for the current demand of the appliance. Remember also that

the longer a cord is, the larger the diameter needed to handle the current load. Selecting a cord that is too small will cause premature failure of the appliance and the cord.

As with the operation of any machinery, all guards and shields must be maintained and replaced if damaged. Always wear close-fitting clothing when operating a chipper-shredder. Baggy or loose-fitting clothing can become entangled in the moving parts and cause serious personal injury.

Chipper-shredders should have a certification symbol of safety compliance from the Outdoor Power Equipment Institute (OPEI) and the American National Standards Institute (ANSI). When selecting a chipper-shredder, check to see that it comes with this certification. Always read the owner's manual. It should be read and understood from cover to cover before attempting use. If you still have questions after reading it, contact the dealer from whom you purchased your unit.

For further information, see also MU publications AS248, Noise - The Invisible Hazard, and AS246, Chain Saw Safety.

SAFETY CHECKLIST

When operating chipper-shredders, take the following precautions:

- Wear eye protection
- Wear work gloves
- Wear hearing protection
- Do not wear baggy or loose clothing
- Keep bystanders away
- Avoid lengthy electrical cords
- Never refuel a hot or running engine
- Make sure the chipper-shredder is firmly set on level ground