

# Stump cutter maintenance

Preventive maintenance helps keep them productive, expert Brad Yochheim says.

by James E. Guyette

■ When operating a stump cutter, you need to pay extra attention to preventive maintenance.

"A stump cutter is a very powerful and productive machine when used properly," explains Brad Yochheim of Rayco Inc., Wooster, Ohio. "However, when improperly operated, a stump cutter can prove dangerous to the operators as well as onlookers."

Stump cutters need a detailed inspection program before and during operation. "Make sure all necessary guards are in their proper places and functioning correctly," Yochheim urges. "Use extra guards such as plywood or canvas curtains when operating near houses, windows, roadsides and other public places."

The stump and surrounding areas should be clear of rocks, metal objects and utility lines. If you are unsure about utility lines, call the utility company to locate the lines for you, or you could end up paying any repair bills.

**Engine hints**—"The engine is the most expensive part of the machine to replace, so religious maintenance on it will be very beneficial in the long run," says Yochheim.

Check and clean the **air filter** at least once a day because of the dusty environment the engine is exposed to.

"The air filter should be taken out and tapped on the sides to get rid of the dirt. It should not be blown out with an air hose."

The engine **cooling fins** should be cleaned at least once a week (to prevent build-up of dirt, wood chips and other debris with an air hose).

"It is very important that the engine's **oil** be checked and changed as recommended by each manufacturer," says Yochheim. "Be sure not to skimp on engine oil quality."

Check and heed your manual's advice on the break-in time needed for the oil and filters on a new machine.

"The **spark plugs** should be checked periodically and re-gapped when necessary. Wisconsin recommends that you replace the plugs after every 350 hours of operation; Kohler recommends 100 hours," Yochheim says.

On all engines, the **fuel** tank should be drained once a month to get rid of debris and

## DOs, DON'Ts

### DO:

- ✓ Watch for people not in safety zone.
- ✓ Wear all proper safety gear.
- ✓ Make sure all guards are in place properly.
- ✓ Use extra guards in populated areas.
- ✓ Inspect stump and area for rocks, metal, etc.
- ✓ Use air hose to clean engine fins weekly.
- ✓ Check, replace oil frequently.
- ✓ Replace, gap spark plugs when needed.
- ✓ Drain fuel tank monthly.
- ✓ Check hydraulic oil daily.
- ✓ Grease bearings daily.
- ✓ Grease pivot points often.
- ✓ Check V-belts, sheaves, chains, sprockets.
- ✓ Check teeth almost hourly.
- ✓ Secure trailer hitch properly.

### DON'T:

- ✗ Walk near turning cutter wheel.
- ✗ Grind near unverified utility lines.
- ✗ Use an air hose to clean air filter.
- ✗ Skimp on oil quality.
- ✗ Use air-type grease gun.
- ✗ Gnaw at stump with dull teeth.
- ✗ Haul stump cutter with undersized truck.

changed once a month and the oil should be changed once a year.

The **hydraulic oil filter** should be replaced after a 10-hour break-in period and every 250 hours thereafter.

All **bearings**, such as the cutter wheel bearings and jackshaft bearings, should be greased with a hand-held grease gun daily. "An air-type grease gun should not be used so as *not* to blow the seals out of the bearings," Yochheim notes.

**Belts, etc.**—All of the **pivot pins** (cylinder ends, king pins, hinge pins, etc.) should be greased once a week or after 10 hours of operation.

**Belt guards, chain guards and rubber curtains** should all be checked daily for loose belts or worn parts.

"The drive system on your stump cutter is composed of V-belts and/or a steel roller chain—or, on newer models, a polychain," Yochheim explains. "A faulty drive system will result in loss of power and productivity."

The stump cutter's **V-belts** should be checked daily for tension. Yochheim says that you should be able to depress one belt thickness in the center of the belt span when the belt is engaged. Check the manual for adjustment tips.

"If the belts are constantly screaming—or loss of power is experienced—the **sheaves** on the end of the belt drive should be checked for wear," he advises. "Usually, the sheave at the engine shaft will wear first." Also, make sure there's no debris on the sheaves or belt path.

The **steel roller chain** or **polychain** should be checked periodically for proper tension and wear. The **chain housing** should be thoroughly cleaned of wood chips, dirt and other debris. Check for sprocket wear, too.

Yochheim says that a steel roller chain needs proper lubrication to function efficiently. The most important part of using a polychain is making sure that it is correctly aligned on the sprockets, or it will wear out sooner.

A stump cutter's **teeth** are the biggest wear item, says Yochheim. "These should be inspected for wear or damage almost every hour," he says.

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sediment, and reduce sludge build-up. Each day, the **fuel line** should be checked to insure that it is not kinked or cut. Replace the **fuel filter** accordingly.

**Hydraulic systems**—Be sure the **hydraulic system oil** level is checked daily. A low oil level will result in sluggish hydraulic cylinder performance. "The hydraulic oil should be changed once a year, every 500 hours, or sooner, if it is noticeably dirty or smells burnt," Yochheim says. On a newer hydrostatic drive, the oil filter should be