

greater operating convenience, the hydraulic pump can be mounted on the tractor within easy reach of the tractor driver. Flexible hose and double-seal couplings for this installation are available.

Yours for better aerifying,
TOM MASCARO

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HOW TO BE HANDY WITH A HACK SAW

For hard cutting, your No. 1 tool is the hack saw. Start to repair a child's wagon, weatherstrip the front door, or get out a rusted bolt, and soon you need a hack saw to cut iron, brass, lead, rope, or plastic.

You can get a hack saw for 80 cents, or you can pay up to \$3.00 for the best of heat-treated spring steel.

Get one adjustable for the three standard blade lengths - 8, 10 and 12 inches and one with two blade positions so you can cut up or down, right or left. Look for a pistol-grip handle; it's easier to control and less tiring to use. In the long run, you'll find it worthwhile to get one with chromium plating to eliminate rust.

To cut anything and be brighter than a lot of people are about it, always put the blade in the frame with the teeth pointing away from the handle.

Tighten the wing-nut adjustment until the blade is rigid in the frame. Insufficient tension will let the blade twist, bend, jam, cut crooked, and break. Too much tension will break the blade at end holes. As your blade grows duller, increase the pressure to keep it cutting rather than rubbing,

You don't have to oil the blade, but don't make more than 40 or 50 strokes a minute. If you work too fast, you may generate heat enough to draw the temper out of the blade and ruin it. The harder the metal, the slower you should make your stroke. Hack saws won't cut the hardest of tempered steels. Before you ruin a blade, if you think the metal may be too hard, test it with the very front or rear teeth.

If you break the blade and have to finish a cut with a new blade, don't insert the new blade in the old cut. Turn the metal over and start a new cut that will come out through the old one. New blades cut a wider slot than old ones; hence new blades in old slots will jam, may break.

After a cut is started, saw with both hands. Bear down enough to keep saw cutting. Too little pressure lets teeth slide and dulls them; too much strips teeth, hastens wear, makes for crooked cuts, may break blade. Make stroke steady, straight, long enough to use

all the teeth. Blade doesn't cut on backstroke; lift it slightly to avoid dulling.

To start a cut accurately, nick the surface to be cut with a file, then start the blade in the nick. Or use your thumb to guide blade until it's cutting where you want it. Bear down enough so saw bites into metal immediately. The teeth are dulled by riding over the metal without cutting.

Don't start a cut on a sharp or narrow edge of metal. You'll have too few teeth in contact with metal, may strip them off. So never mount a flat metal strip vertically in your vise and start sawing straight across the thinnest part, it is one sure way to ruin the blade. Instead, start with the blade at a slight angle to a flat surface. Continue to cut slantwise across the flat of the metal. That lets more saw teeth engage the metal, and makes it easier to follow a straight line. And you won't ruin the blade of the saw.

Blades have 14, 18, 24 or 32 teeth per inch. Best blade for general use is the 18-tooth one. For thin material, use the 32-tooth blade, so at least three consecutive teeth touch at all times. If only one or two teeth touch, they catch and shear off. On the otherhand, a blade that's too fine for the job cuts slowly and may clog up with chips. A blade with a soft back and hardened teeth is best for a handy man; it's low cost and durable.

To cut a thin sheet of metal, clamp it between two pieces of wood and cut through the wood and all; you can cut clean without bending the metal.

Thin metal tubing is easier to cut if you insert a round stick in it. For any work that is polished and mustn't be marred, or that is round and thus hard to hold, make two clamps of soft-wall-board or strips of heavy cardboard.

By D. Hough.

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"MUGGING YOU FELLOWS IS
A RELIGION TO ME."

