Power Saws In Trees

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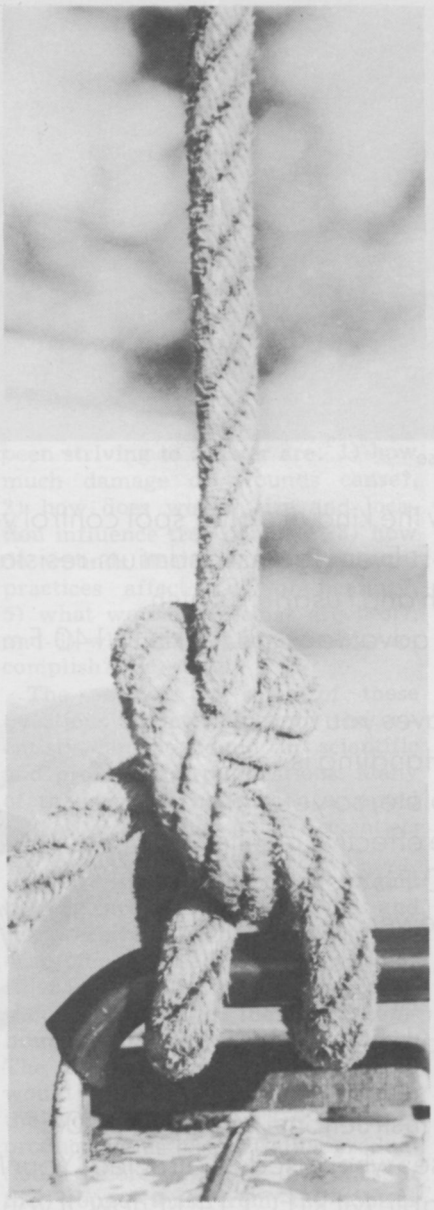
OVER the years, there have been many major innovations in tree trimming tools. Power saws, chippers, aerial lifts and chemical growth retardants, just to name a few, have improved the climber's lot.

But perhaps the most important invention has been the introduction of the ultra-light weight chain saw. This handful of power that can cut through the toughest limb in seconds has extended the capability of the man in the tree, improved his efficiency and resulted in a superior job.

For the arborist, the advent of this saw has meant increased accomplishment because it represented opportunities that heretofore had to be done by hand or with heavier chain saws. Properly trained climbers a decade or more ago used the heavier saws proclaiming them as a major breakthrough. Their recognition of the use of power tools in trees has now evolved to a point at which few climbers today would tackle a job without the aid of a small, light weight saw as part of the basic tool package.

The versatility of this type saw is not without problems, however. When the arborist of yesterday used the heavier saw he practiced a set of safety precautions that are still applicable today but only believed by about half of the trade. Ten years or more ago the climber tied an extra rope (not a life line) to the saw to provide the extra measure of safety needed. Today's climbers often believe that the light weight saw, in addition to being easier to handle and more compact, is safer than its ancestors.



The crossover on the top handle is the preferred place to tie a rope. A clove-hitch (shown above) is usually satisfactory.

This is not exactly true. While it is true that ease of handling and compactness have made the saw more versatile, the features of today's models parallel yesterday's in practically every detail, only in miniature.

Consider that current models still have a bar and a chain (sharp we hope). Each has an engine which moves the teeth on that chain at speeds of approximately 3,000 feet per minute and will cut off a finger, hand, or leg just as efficiently as its older big brother. Each must also be stopped in the same manner as the larger saws. (Even though it *can* be used with one hand, it should be held in both hands. Shutting off the saw while holding it with one hand is possible but far more difficult than when having both hands on the saw.)

Today's saws like the subcompact cars offer every feature and more of the larger versions—including the chances for an accident. And even the highly trained climber can have a mishap.

For example, not long ago, an experienced trimmer was using a saw to strip a large elm. Both saw and man were properly crotched. When the cut he was making was finished, the man swung away to clear the limb, and let the saw swing without shutting it off. When the two bodies (man and saw) swung back together, the saw swung into the climber's rope and cut it. The man fell 47 feet and landed on another man before

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hitting the ground. The man on the ground was permanently disabled. The man who fell was only slightly injured and returned to work two days later.

I do not attempt to debate the cause of this accident. I point out only what can happen and note that this accident should not have occurred. I do use this to illustrate that saws used in trees are a hazard and special care much be exercised in their use.

Special safety rules wholly apart from those practiced on the ground must become routine with the professional trimmer. The use of a safety line on a light weight saw is as applicable as it was for the heavier saws. If for no other reason, today's direct drive saws obtain maximum power when the engine is operating at full throttle. Thus, the chain cuts much faster than older gear driven models, which by design cut slower and operated at lower revolutions per minute (rpm). Consequently, the chances of a saw getting out of control and causing an accident are greater.

Most arborists are aware that many trees can now be trimmed properly and completely with the power saw. And while this practice is gaining in popularity, there are still several points worthy of re-emphasizing. These include:

1. The general structure of the tree and the location of "wires," if any.
2. Where cuts will be made.
3. Where the trimmer with crotch his life line.
4. Where the safety line for the saw will be crotched.
5. Will the saw start with a minimum of effort on the ground?
6. Will any limbs cut require a rope for lowering or can they be cut so that they will fall safely to the ground?
7. Where will the lowering line be crotched if it is needed to lower severed limbs?

After considering these items the climber is now ready to move into the proper position in the tree and "tie in." The power saw rope which is used only for raising and lowering the saw and for no other job, must be placed in a proper position to insure the trimmer's safety and the safety of the saw.

Tie the rope to the saw at a balancing point, preferably on the cross-over on the top handle. A clove-hitch with a half knot is usually satisfactory. Once tied, the saw is ready to be raised to the trimmer in the tree. The rope handler must work in conjunction with the trimmer from now until the saw is relowered to the ground. The trimmer should be positioned so he can help guide the saw while it is being raised so as not to hit the trunk or limbs of the tree or other objects that might be present. The trimmer should have in advance, with his hand saw, cleared out the best suitable area for raising the saw into the tree.

The position of the rope is to allow the saw to swing free, and away from the trimmer and limb being removed. The prime duty of the man on the ground is to stay alert in keeping a taunt line *except* when the trimmer is making a cut; At this time the trimmer holds the full weight of the saw.

Using all safety precautions including secured hand lines, trimmer in a safe position and others, the trimmer is ready to start the saw. It should be held steady with one hand and the starter rope pulled with the other. It should always be held directly in front of the operator and in a level position when possible. Always be sure the trimmer has visual contact with a man on the ground so hand signals can be given in case something unexpected occurs.

Here are a few cuts that can be made by a power saw in a tree. 1. The undercut—for pulling a limb up and away from objects. 2. Top cut — A limb cut through from on top will hinge over but should have a snug rope on it and should also be finished by a hand saw. 3. Undercut and top cut — An undercut approximately one-third through and cut through from the top will let the limb fall free.

Always remember, when the posibility of the saw rail being pinched or any unsafe situation exists, finish the cut with a hand saw.

In our operation, we also consider the following points where chain saws are involved:

1. Before operating a power saw in a tree, the trimmer must have considerable experience with chain saws on the ground.
2. The saw must be kept in good mechanical condition with a sharp and properly filed chain.
3. The same kind of cuts are made with power saws that are made with hand saws.
   A. When cutting be careful not to pinch the chain.
   B. When it is advisable to use a hand saw to complete a cut, move power saw to a safe location.
4. One man saws should be used for making large cuts and final flush cuts. *There should be enough work to warrant a power saw.*
5. When power saw is no longer needed in the tree, the man in the tree will assist the man on the ground in lowering the saw.
6. Saws should never be raised or lowered with engine running.
7. The gas tank must not be filled while saw is in tree.

8. Power saws should be operated in a horizontal position when possible.

9. Be careful of burns from hot muffler or cylinder when using gasoline saws.

10. Make sure that goggles are in place.

11. When a hazard exists while using a power saw, the cut should be completed by hand.

I have noted that a power saw used in a tree should be supported by a safety rope. Exceptions to this rule are discussed wherever arborists gather. A 75 foot dead poplar with few side branches located between two houses and inaccessible by a bucket . . . a six pound saw attached to a belt is only a small burden . . . the trimmer must maneuver two ropes instead of his one life line—all are good reasons why this rule should be abolished.

But the fact remains that safety to the trimmer is a matter of life and death. Exceptions to safety are a prime cause of accidents. The few extra minutes required to re-evaluate the situation, use a hand saw to make a cut or hoist a saw into a tree are a great reward over losing an arm, leg or possibly a life.

In a tree, a saw on a safety or extra line attended by a man on the ground can be held long enough to be shut off and then released so that both hands are free to allow the climber a better control of his swing or fall. Without the safety line the trimmer must make his initial move using his feet and only one hand. Should this be a defensive move, the climber may not have time to execute it properly and an accident may result.

The professional trimmer is one which requires safety, skill, dexterity, agility and superior physical ability. Why limit any of these attributes through an accident. After all, how many one arm or one leg climbers do you know in the business today?

BOOK REVIEW

HOME LAWN CARE, 145 QUESTIONS AND ANSWERS; by Melvin J. Robey, superintendent of athletic facilities at Purdue University.

The booklet is soft cover, 6x9 inches in size and is illustrated throughout. It has 42 pages. Price is $1.00 plus 25¢ for special handling and mailing.

This booklet can be used as an excellent sales aid for the contract applicator, arborist, turf specialists and consultants. It is divided into nine sections including information on facts on fertilizers and their use, watering your lawn, mowing practices, lawn diseases, insect control and maintenance tips. Questions asked are presented informally and answers are written in non-technical terms.

A number of charts, drawings, tables and pictures show the homeowner just how to accomplish a specific job or how to recognize certain disease or insect problems.

The non-technical approach Robey presents makes this booklet a good "leave with" item. The section on maintenance tips is one of the best presentations in print today.

Orders should be sent to HOME LAWN CARE, P. O. Box 2126, West Lafayette, Indiana 47906.