

FOREPERSON'S MANUAL



PACIFIC COAST

TREE EXPERTS

EMERGENCY TELEPHONE NUMBERS

CITY OR TOWN: _____

Rescue Squad: _____

Ambulance: _____

Police: _____

Fire: _____

Utility Office: _____

Other: _____

CITY OR TOWN: _____

Rescue Squad: _____

Ambulance: _____

Police: _____

Fire: _____

Utility Office: _____

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Because of the widespread operations of the Company, it is important to establish minimum standards of work methods and quality for each individual Foreperson or Crew Leader, wherever they are located.

To make our work more uniform, we have established procedures and techniques designed to serve our customers with the best and safest operation possible. This material is practical and time-tested and given to you as a guide to assist you in performing your job more effectively.

You will find this Manual useful as a day-to-day reference when you have a question about some particular part of the job of running your crew.

Understand that this Manual is a general guide. Additional standards may be in effect for the area in which you work. The most stringent rules take precedence.

This Manual is systematically updated and expanded to be more useful and valuable. Therefore, your corrections and suggestions to improve this Manual are encouraged, are welcome, and should be addressed to:

Pacific Coast Tree Experts
Human Resource Department
22048 Sherman Way, Suite 106
Canoga Park, CA 91303

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PACIFIC COAST TREE EXPERTS

Years ago, it was a luxury to have a telephone and electric service. The public accepted it as such, considering it fine when it worked and too bad when it failed. Rates were high and the uses, particularly of electric energy, were limited. Almost any small storm caused interruptions to service. Lights were frequently out for hours at a time and telephone communication ceased.

Times have changed. Electric energy has taken over more and more of the tasks around the house and in industry, and the telephone has become an essential part of our lives. To meet the ever-mounting demand for electricity, utilities have built enormous power plants connected by transmission lines, voltages have been increased, and the distribution network is constantly being expanded. Telephone companies use a great deal of cable and short wave, but there are still many areas in the country with thousands of miles of open telephone wires.

Most of these electric and telephone lines are along the highways and roads in rural areas and along the streets in towns and cities, where there are many mature trees and where young trees are constantly being planted. These trees, of course, cause serious difficulties in several ways:

1. Limbs may break off and fall across the wires causing arcing or a burndown. Limbs growing up into the conductors will cause the same problems.
2. Limbs may be weighted down with ice, sleet, snow, leaves, or rain so as to contact the wires and interrupt service.
3. It means possible injury should live wires fall to the ground; with consequent lawsuits, claims, and public ill will.
4. Emergency service restoration is expensive and troublesome to a utility.

Interruptions create a lack of confidence by the public in electric and telephone service.

It is evident that trees must be trimmed and, the utility companies want the best public relations, fewest interruptions to service, and most economical operations.

It is evident that trees must be pruned, if the utility companies want the best public relations, fewest interruptions to service and most economical operations.

It was to fill this need that the company was founded and, by specializing in this field, been able to concentrate on items considered important by the utilities:

1. High quality work
2. Reasonable cost
3. Safety
4. Reliability
5. The best personnel and equipment
6. Financial responsibility
7. Good public relations

PACIFIC COAST TREE EXPERTS

It is always The Company policy to promote from within our Company to fill new jobs, whenever possible.

Your General Foreperson, and Supervisor almost certainly started as climbers and worked up through the ranks to reach their present jobs.

The same opportunity is available to you. Pacific Coast Tree Experts continues to expand, adding new crews, new customers. We are constantly looking for experienced Company employees who are both able to manage bigger jobs and also willing to take them on.

Most people do hope to get ahead, but too few act to make it happen. *Here are 4 key steps a Foreperson can take to prepare for greater responsibility in the future:*

1. First and most important is to excel at your Foreperson job. You must run a better crew than other Forepersons. You must show the good sense, judgment, energy and initiative to do more things better than other Forepersons who also are seeking promotion. We have hundreds of Forepersons who do a good average job, but no more. They are secure as a Foreperson, but probably won't be promoted. It is the skilled, hardworking, *outstanding* Foreperson who gets the promotion when the opportunity occurs.
2. Cooperate with your General Foreperson, Management and the Canoga Park office. Be *dependable*, so that everyone gets to know that when you are asked to do something, it gets done, and done properly.
3. Pay special attention to the paperwork required of you. Fill it out accurately, completely, and on-time. Every responsible job involves the ability to deal effectively with reports, records, and correspondence. Develop this competence within yourself.
4. Continually add to your skills and knowledge base. You can shorten the time it takes to gain industry experience by reading, taking study courses and evening classes. You will learn faster by asking questions and by being observant.

PAY RATES AND WAGES

Wages are based upon experience and productivity and company's performance and economic standing under the Line clearance division and set by the Director of operations for private work operations. When you fill out an employment slip on a new person or someone previously employed, be sure to check with your General Foreperson for the proper pay rate. All requests for changes in rate should be directed to your General Foreperson, who will fill out the necessary papers for the Payroll Department, if the request is in order.

YOUR GENERAL FOREPERSON

Building a cooperative and positive relationship with your General Foreperson is essential.

Your General Foreperson's coaching and encouragement, combined with your personal effort, will make you more professional and prepare you for promotion in the future.

Your General Foreperson should know that when he asks you to do something, he can depend on you to get it done. Nothing else matters without this trust.

An effective Foreperson takes charge and directs the crew to accomplish the assigned work. You should use your own good judgment in carrying out orders. Using good judgment *includes* asking your General Foreperson for additional instruction or advice when help is needed.

A Foreperson who resents the direction, correction, and criticism of the General Foreperson is short-sighted and unrealistic. Learn everything you can, keep an open and inquiring mind, and try to see each point of view. Your General Foreperson has specific responsibilities to help the customer get the best possible work and to help our management control costs. There is constant pressure on every General Foreperson to improve operations. This is only possible with your IMPROVEMENT as a Foreperson.

Criticism, when you get it, is not personal; it is intended to make you and our operations more professional. It's best to face up to shortcomings when they are pointed out; since correction will help you grow in capability. When you feel your General Foreperson's criticism is unjust, be sure to fully and objectively talk this out. Only in this way can you clear the air and be sure that all the facts and feelings are recognized. In most cases, a satisfactory understanding can be reached.

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The things you are responsible for are many and varied; they range from getting good clearance to conducting an active safety program. Let's examine in detail the things that make up *effective crew management*.

SAFE OPERATIONS – From the time you leave the starting point each day and until you return, *you must continually coach your crew to work safely*. The Foreperson is responsible for the crews' safety.

Your personal experience and the Company's basic policies will help prevent job injuries. You should be alert, systematic in applying policy principles, correct any unsafe practices and constantly inspect your equipment.

PLANNING – The organization of your work is very important so you can get maximum production safely and efficiently. You should have enough work lined up so the crews do not have to stand idle while you get permission. Appropriate work should also be lined up for bad weather, if possible.

See that you distribute the workload fairly among your crew.

Prepare yourself before EMERGENCIES arise, such as a serious injury to a person on your crew. Be sure that your First Aid Kit is fully stocked, all crew members are familiar with the location and contents of the First Aid Manual, you have the required amount of people trained in CPR and each employee knows the local Emergency Response Phone Number, (in most locations it's 9-1-1).

CHECKING THE PERFORMANCE OF YOUR CREW – As Foreperson you must set the standards on the crew and make sure that the crew members maintain these standards. Watch your crew while they work and correct them promptly when they make a mistake. To keep crew production at a uniformly high level you must be constantly aware of what your crew members are doing. Inspect the work as it is completed and do not tolerate a sloppy job. Remember, you enforce the standards! Provide regular feedback to each crew member and watch your operation pull together!

It is important to assure that the customer gets a good day's work for their money. If the utility is pleased with your work, it increases the chances for continuous employment for you and your crew.

CREW CONTROL– As Foreperson, you must insist on good behavior and work attitude among your crew. Picking from trees, loitering, and killing time all have a bad effect on crew operations. Loud or profane language and rude conduct toward the general public is not permitted. "Horseplay" must not be permitted since it is unsafe and creates a poor impression on anyone observing the crew. It is the Foreperson's job to correct each person when these objectionable activities start, before they cause trouble. Discipline or discharge may be required in serious cases. Make sure that you understand and apply the Company discipline policy consistently and uniformly.

To obtain good performance among your crew members, you must set a good example for them to follow.

Remember to give credit when credit's due! When someone knows they have done a good job, a word of praise from the Foreperson is most rewarding. Inspire enthusiasm in your crew by your actions and by your attitude. Let each person know that the job is important . . . it is!

SELECTING NEW CREW MEMBERS – Everyone involved in supervision has the responsibility to carefully select the *best* available candidate to fill crew openings.

Your good judgment about people will show up in low turnover, full crew hours, and promotable crew members. If your turnover is high, put more effort and thought into locating and training people who have *staying power* and can match your work requirements.

Remember that The Company is committed to a program of Equal Opportunity Employment. You must take Affirmative Action to find minority and female employees.

COST CONTROL – We can succeed only if you are concerned with *all* the details of operating your crew. In our business small items are critical. We make every effort to equip your crew with the best available tools and equipment. We need your help and effort to make this investment a practical one.

Preventive maintenance, such as greasing, changing oil, tightening nuts, waxing, and making mechanical adjustments or replacements, when needed, reduces expensive repair charges. Taking care to prevent tool losses and abuse saves replacement costs. **TURNING OFF ENGINES, WHENEVER PRACTICAL, REDUCES GAS CONSUMPTION.**

MANAGEMENT RELATIONS – Involves working with and learning from your General Foreperson and the Safety and Risk Management Department

Willing cooperation with Company policy is another important part of Management Relations. Do you enthusiastically support the Company safety program? Do you carry out the policies set forth in this *Manual*? It's all a part of your job as Foreperson to do so.

CUSTOMER RELATIONS – You must work effectively with utility personnel and other customers. A good Foreperson endeavors to maintain friendly relations with the utility person and other customers at all times. Even though the requests of the inspectors may seem unreasonable at times, remember it is your job to keep these people satisfied. You must strive to correct any faults which strain relations with the utility company. If you have special or unusual problems with the utility, be sure to check with your General Foreperson.

There are many things you can do, of course, to ensure good relations with the customer. Most important is to make sure that the utility always gets a good day's work for its money.

Get any required reports into the utility and others on time.

The utility company should be informed of any unusual situations encountered on the job such as damaged poles or wires.

Handle complaints as they arise, don't run away from them. A complaint can generally be taken care of right on the spot by an understanding attitude and a real desire to be fair to the property owner. It is when complaints are ignored that they grow and finally get back to the utility company. The number of complaints concerning your operations affects the way the utility looks at you and your crew.

As a Foreperson you should strive to assure that the utility officials think highly of your operation.

PUBLIC RELATIONS – Another area in which a Foreperson must demonstrate ability is in getting along with people. Public relations are the effectiveness in dealing with the general public. What makes one Foreperson effective and another not so effective in public relations?

A neat appearance and the ability to interact with the public in a concerned, friendly and courteous manner certainly contribute a great deal toward getting along with the property owner and the general public.

Also important is the ability to explain proposed work to a property owner and to be convincing that you have a real interest in protecting their property.

Be sure to follow your utility's policies regarding customer notification and/or obtaining permission. Permission or notification should be handled either by the Foreperson, a designated customer contact crew, or other method approved by the utility. **Written permission is required prior to tree removal.** You should also be familiar with any local rules and regulations regarding pruning restrictions, chip disposal, tree disease prevention, or other issues. If there is any doubt about whether proper procedures have been followed, STOP WORK AND ASK YOUR GENERAL FOREPERSON.

Our Forepersons are generally successful in getting public understanding and support for our work. Usually a courteous request is enough. Once it is properly explained, most people realize the necessity for pruning and recognize that you will be as careful as possible. Others want more details about what you intend to do. Bear in mind that they have a perfect right to ask and you must show them every consideration.

A few will flatly refuse and angrily give some grievance or previous disappointing experience to justify their stand. This group will tax your knowledge and ability. Your attitude and conversation must inspire confidence. Even the toughest will understand and admit some pruning is necessary. A trial demonstration can usually be arranged to meet objections.

While the job is in progress, the general public should be inconvenienced as little as possible. The property where the work was done should always be left in good condition. A Foreperson who follows these procedures will have few complaints, but when one does arise, it should be taken care of promptly and properly. Any complaints you cannot take care of yourself should be referred to your General Foreperson immediately.

Professional work and respect for individual concerns will change attitudes. The Company will have made another friend and demonstrated to the utility company that our service does pay dividends.

JUDGMENT – This is built by constantly developing job skills, by making decisions that minimize the risk of injury or property damage, and by the selection of the "best practice" from the variety of alternatives of doing any piece of work.

It is also the skill of *knowing when to get guidance* from your General Foreperson BEFORE proceeding on a course of action about which you have questions or concerns.

KNOW HOW – This is your knowledge of the job and your effort and ability to keep up with new developments in our industry.

As Foreperson, you should know the growth rate and structure of various trees, and prune accordingly. You need a basic knowledge of electrical conductors and the clearances required on different voltages. A knowledge of ropes and knots is necessary and you should be able to use all your tools and equipment efficiently and safely. The only way to acquire this know-how is to gain experience by actually doing the work as a climber. All our Forepersons have come up through the ranks and have a broad background of line clearing experience.

A Foreperson has this knowledge and also the ability to pass it on to the crew members. You should certainly be able to demonstrate anything that you expect of your people. The Company name on a truck or jersey will not make you a tree expert, but a sincere interest in the work, constant observation and a desire to improve your knowledge of line clearance will.

DRIVE – This is a quality consisting of enthusiasm, energy, and a willingness to work hard. A Foreperson needs drive especially when the going gets tough.

Even though no one likes an unpleasant job, a good Foreperson promptly gets to work and gets it done.

A good Foreperson likes the outdoors and tree work and gives the job all-out effort by actions and words, inspiring enthusiasm among the crew. A good Foreperson is always at the job on time.

INITIATIVE – This is one of the most valuable qualities a Foreperson can possess. Initiative is made up of mental alertness, the ability to think for yourself, originality in seeking new or better ways to do things, and the ability to be a self-starter.

A Foreperson can display initiative in many ways. They should be able to size up situations and make decisions intelligently on the basis of Company policy and personal training and experience, and not depend on the crew to do the thinking or the decision making.

The Foreperson should be flexible enough to accept new work methods when they are advanced by the Company. As new types of equipment and new methods of doing things are introduced into our industry, this will become increasingly important.

A Foreperson should accept responsibilities willingly and always try to do a little more than is expected.

A person with initiative will be ambitious and have a strong desire to get ahead. As a result of this, improvement will be constant, so as to prepare for promotion.

In time of emergency, you, as Foreperson, must take the initiative immediately and direct your crew, so that they function smoothly and without panic.

OTHER FACTORS – There are a number of other important factors involved in crew management. Safety, supervision and training, crew appearance and equipment must certainly be included. Because these items are so important, they are covered in detail in other sections of this manual.

SUMMARY – This list of factors which make up effective crew management is a long one. It is the coordination of all these factors in daily operations which makes a successful Foreperson.

Being the Foreperson of a crew is a big job and it takes effort and ability to fill it. Your supervision is absolutely necessary to coordinate all these factors which are essential to effective and safe crew operation.

FOREPERSON'S AND CREW LEADER'S OPERATING CHECK LIST**CREW MANAGEMENT**

- Someone always in charge
- Productivity (trees, chips, hours)
- Quality of work
- Job planning
- Work organization
- Employee Selection and turnover
- Continuous training
- Instruction follow-up
- Attitude and morale
- Discipline
- Full man-hours
- Starting point location
- Start and quit times
- Coffee and lunch breaks
- Storm Emergency instructions

SAFETY:

- Hard hats
- Eye, leg and hearing protection
- Safety vest
- Daily work habits
- Rescue drill
- Resuscitation practiced
- First-Aid kit full
- Fire Extinguisher
- Weekly/Daily tailgate discussion

CREW APPEARANCE:

- Company jerseys
- Suitable work boots
- Neat, no stubble, clean

JOB SITE:

- Protect passersby & observers
- Safety vest
- Jobsite Set-up (Road signs, wheel chocks, Traffic cones, etc.)
- Attention to neatness
- Final clean-up

TRIMMING:

- Utility specifications
- Maximum clearance
- Maximum removals
- Lateral/Natural Technique
- Branch Collar cuts, no rips, no hangers
- Overhang reduction
- Weak crotches
- Cooperation with Inspector

TRUCK CHASSIS AND CHIPPER:

- Mechanical condition
- Lights, tires, glass, paint
- Daily-Weekly Inspection/Maintenance
- Lubrication
- Regular wipe-off and wax
- Repair cost control
- Cab housekeeping
- Wheel Chocks
- Blades & cutter bar
- Operation & Maintenance Manuals
- Decals & numbers

CHAIN SAW:

- Condition-cleanliness
- Chain sharpened
- Daily maintenance
- Repair cost control
- Safe operating technique

AERIAL DEVICE:

- Mechanical condition
- Daily-Weekly Critical Component INSPECTION
- Daily-Weekly Maintenance/Inspection
- Positioning for production
- Plan for fullest utilization/hour
- Outrigger Pads

TOOLS:

- Daily Inspection/Maintenance
- Using the right tool
- Rope & saddle inspection
- Tool cost control
- Storage space housekeeping
- Grease gun

REPORTING:

- Daily Pre-Trip reporting
- Daily Post-Trip reporting
- Correctness
- Completeness Readable & clear
- On time
- Use right form

PUBLIC RELATIONS:

- Permissions/Notifications
- Signed removal permits
- Courtesy
- Refusals
- Anticipate problems

UTILITY RELATIONS:

- Accurate location reporting
- Area trimming
- Report pole, wire, insulator problems
- Refusal reports

PRIVATE TREE WORK

No employee has the authority to solicit or engage in private tree work as a representative of The Company. Refer all requests for private work to your General Foreman.

Anyone who solicits or does unauthorized private work during working hours, who misrepresents themselves as doing private work for The Company, or who uses Company owned tools or equipment for private work for their own account at any time is subject to discharge.

DISHONESTY

One of the personal values of line clearance work is the opportunity to "run your own show," for the supervision of your crew operation is largely left up to you ... but this also creates temptations.

Any employee who is accused of stealing, or who conducts themselves dishonestly, will be immediately suspended, pending investigation.

SUBSTANCE ABUSE

It is the policy of The Company that management shall take appropriate measures, up to and including discharge, sufficient enough to assure that drug or alcohol possession or use by employees or other persons does not jeopardize the safety of our operations or otherwise adversely affect the Company, its employees, customers, or the community.

Supervising people is a critical part of any Foreperson's duties. Anyone can gain skill at supervising people, if they pay attention to a few basic ideas and then put these ideas to work systematically and thoughtfully.

JOB ATTITUDES

As a Foreperson, you are the most important influence on your crew, and your personal behavior tends to establish the work climate, for good or bad. Your job is to build a team and develop goodwill in working together toward the common goal of effective, professional line clearance.

Act to inspire confidence in your crew members by making sound, careful decisions, helping solve work problems, operating safely, and being honest in your dealings. Set the example and be concerned that people share their knowledge to help each other work smarter and safer, and stress the good things about the job and the Company.

Develop and talk over the work standards you expect: safety, quality, production, care of the equipment, and behavior toward the public and our customer. Stress the importance of keeping a full crew, controlling avoidable absenteeism, and letting you know in advance or as soon as possible when a day will be missed.

Take special care to let each person know your opinion of their work and progress, to discuss changes and new ideas in advance to test them and reduce resistance, to make job assignments and enforce rules fairly, and to avoid throwing your weight around.

What you are constantly trying to do is make the work situation as enjoyable as possible by reducing the unpleasant surprises, annoyances and irritations that you can influence, and at the same time setting high, professional standards of work.

EMOTIONAL STABILITY

Self-confidence, freedom from visible tension and anxiety, and consistent behavior all go to make up emotional maturity. Being emotionally mature means you are guided by reason rather than emotions.

An unstable person is hard to work for and is hard to supervise. If you don't know which way a person will react under job pressures and frustrations, it is like handling a time bomb. Anyone supervising the work of others has a primary job responsibility of behaving in a reasonable and calm manner. Losing your temper prevents the clear thinking that is essential to getting our work done safely and well.

FOREPERSONSHIP

This has to do with the quality of relationships with people, be they crew members, company supervision, customer supervision, property owners, or the general public.

As a Foreperson, a vital part of your job is developing a positive relationship with the people you supervise. The quality of their work, as well as their attitude toward the job and the company, will be largely influenced by this relationship. You provide the direction and the information. You are the one who keeps things moving and sees that things get done and done right.

SECTION 5 SUPERVISING PEOPLE *(Continued)*

When all is said and done, as far as your crew is concerned, you are the Company, and you must be tough-minded enough to carry out The Company policy, even though it doesn't always please the crew members or other associates.

As a Foreperson, you must constantly work at better understanding people. Each person working for you is different in appearance, ability, past experience, and feelings. Your relationship with each crew member depends on your willingness to learn more about these ingredients and to respect the fact that they do vary greatly from person to person.

As a Foreperson, you know first-hand your people and their problems and their work. With this knowledge and understanding, you can develop good morale and build an operating pattern of harmony and efficiency. One of your big jobs is to try to avoid or eliminate situations which unnecessarily create frustrations and anger. You do this by keeping your crew informed, instead of uneasy, and by listening and suggesting, rather than ignoring and ordering. The energy used up in feeling angry and hostile can be used more efficiently in doing the work, and with less wear and tear on people.

It is no longer practical, and it never was sensible, to drive your crew and make them toe the line, "or else." People have learned they don't have to accept being pushed around. Management has learned that most people who are treated this way slow production, make more errors than usual, and are increasingly uncooperative. Therefore, you just cannot succeed by cracking the whip and threatening. You have to get the crew members to WANT to do their best. You have to learn to be a leader.

People will only take abuse and lack of respect for as long as it takes them to find another job. The fact that we provide a job and wages does not buy you steady attendance, job effort or interest from your crew. Only good leadership, based on work organization and consideration will result in a smooth running crew.

WORK ORGANIZATION

This involves firmly taking charge and planning the work so that there is a minimum of wasted time, wasted effort, and indecision as to who is to do what and how and how much. Give your crew assignments clearly and in detail, so that they know exactly what is expected. Be sure to make it easy for them to ask questions, so that there will be fewer misunderstandings. Organization also means having good equipment that is carefully maintained.

CONSIDERATION

This is a leadership behavior that reduces tensions and dissatisfaction. It has to do with being thoughtful of individual needs, so that you CAN set high job performance standards and be sure of getting willing effort. Here are some of the things that are important: keeping promises, not violating confidences, listening rather than cutting comments off, encouraging suggestions and new ideas, and not ridiculing people for mistakes. If you stop and remember the kinds of unnecessary things that upset you when you were climbing or pulling brush, it will help you be more considerate, which is not be confused with being soft.

Try each day to do a little better in terms of understanding yourself, your crew members, and the work you must do together.

In addition to solving work problems for your crew members, and when you gain their respect and trust, it is possible they will also ask for your help in solving personal problems. This is a high compliment and part of good supervision. Listen sympathetically and ask questions that help add to understanding and to reaching a decision. BUT generally avoid giving direct advice. However good your intentions and experience, you may innocently offer unwelcome or bad advice that can damage the relationship between you and your crew member.

ON THE JOB

You, as Foreperson, should be on the job at all times, except when absolutely necessary to leave to get permissions, etc. When you must be away the crew should know exactly where you will be. Arrange things so that you are always on the job at starting time to get things under way, and at quitting time. A crew shall never be left without supervision! If you must leave your crew for a valid reason, see that one of your qualified crew members, who have been certified to Foreperson, takes over the Foreperson's responsibilities while you are gone. If no one has been certified to Foreperson, work shall not proceed until other qualified supervision is available. Everyone must be told who's in charge when you are away. Then, should an emergency or some other important matter come up while you are away, there is no doubt as to who shall make the decisions.

DISCIPLINE

Discipline is necessary on any crew. When the time comes for discipline, don't put it off. The Foreperson must be firm but not act 'hot-headed'. Never embarrass a person in front of others. Call that person off to the side or wait until you are alone with them. Be specific when you discipline. Define what is wrong and what must be done to improve the situation. And once you say what you want done, make sure it gets done. Once the crew starts telling you what to do, you are no longer the Foreperson; you're just the person who fills out the timesheets.

On any crew, disputes may arise occasionally between crew members. These disagreements have to be settled-and fast! If allowed to continue, they can split and disrupt the entire crew. Be fair but firm in settling these disputes. Occasionally there will be a troublemaker on a crew who does nothing but create friction. The quicker you terminate the employment of a person like this, the better off you and your crew will be.

HELPING YOUR CREW DEVELOP

Training each member of your crew to do the job more skillfully and safely is a vital responsibility. Your objective should be to develop people to where they are able to solve their own job problems, but with the judgment to check with you on the tough ones. Share your experience and knowledge where it is helpful. However, be careful not to over-direct a capable operator. Once people have good skills, they'll appreciate the chance to use their own initiative and ingenuity trying techniques on their own.

Some of our Forepersons always seem to have ready a crew member capable of advancing to Foreperson. This is true because these Forepersons are good at developing people to be very skilled in line clearance. How many of these procedures do you follow with your crew?

- Do you take the time to help any crew member with a work problem? Your judgment and ability, which have been developed by years of experience, are extremely valuable to the members of your crew.
- Do you answer questions fully and to the best of your ability, or find the answers if you don't know them off hand?
- Whenever you see an unsafe or incorrect practice, do you immediately stop the person and show them the right way?
- Do you always have someone trained to take over in your absence? This will not only leave your crew in good hands while you are away, but it will develop the person who is temporarily in charge.
- Do you give directions and explanations clearly and completely so your crew understands what you want?
- Whenever a person fumbles or is unsure, do you take the time to show how to get the job done safely and correctly?
- Do you have a definite plan to follow in developing the people on your crew?

Training involves your responsibility to (1) develop crew members to be fully competent in their present jobs and (2) prepare them for advancement to more important responsibilities.

Every Foreperson can train new people effectively, if a systematic plan is used. The right starting point is to hire people who are willing to work, want to learn, and whose prior work experience suggests this work ethic. Care in selecting a new crew member will make training easier and reduce turnover.

From the very first minute on the job, it is important to help a new crew member get comfortable in the work and with the others on the crew. Regardless of previous tree experience, someone new must learn your method of operating, your work standards, and what you expect. Don't make assumptions about someone's ability; things that your own experience makes look easy and obvious may look hard and unfamiliar to the new crew member.

There are many, many work skills for you to teach. Except for ensuring that essential safety elements are understood from the very beginning, the new crew member doesn't have to learn them all today, this week, or even the first month. The important factor is to have a planned program and time schedule for instruction and practice. Your training program has to be "tailored" to the individual, since each person will have a different attitude, knowledge and skill level, and learning ability ... all of which are independent of the job situation and the type of work you are doing.

SAFETY TRAINING FOR THE LINE CLEARANCE SPECIALIST

Line Clearance is distinctly different and separate from all other tree work because of the special problems imposed by the continuous work close to overhead electric conductors and the special techniques employed to control the hazard.

The seriousness of the hazards clearly require that the line clearance specialist be carefully trained in these skills and methods unique to this field, and that everyone be required to work in strict accordance to the rules in every phase of the work. *THEREFORE, THE FIRST AND MOST IMPORTANT RESPONSIBILITY OF THE LINE CLEARANCE FOREPERSON AND CREW LEADER IS THE CAREFUL TRAINING OF CREW MEMBERS IN THESE TECHNIQUES, TOGETHER WITH CLOSE SUPERVISION AND DISCIPLINE MEASURES TO ENSURE COMPLIANCE.*

BEFORE THEIR INTRODUCTION TO THE BASIC TECHNIQUES OF LINE CLEARANCE, TRAINEES MUST HAVE A CLEAR UNDERSTANDING OF HOW THEY CAN GET INTO TROUBLE WITH ELECTRICITY AND ITS EFFECTS ON THEM. (See Section 11, “Understanding Electrical Hazards.”)

Any electric contact is potentially fatal, and must be avoided.

SKILL TRAINING

Whatever you are teaching, you will find the 4-step method of instruction a big help. The 4-step method was successfully used during the Second World War when large numbers of unskilled people had to be trained quickly. The 4-step method is simple and effective.

Step 1 - TELL - Provide some background about the importance of our work, our customers, and about The Company. Help develop the most possible interest in learning.

Then get to specifics. What is the job element to be learned, why is it important, and what the hazards are? Tell your trainee what you are going to teach, where it fits into the total job, and the steps and key points to do this task correctly and safely.

Step 2 - SHOW - Show the trainee how to do the particular job element. Be sure that they are placed correctly and observing from the same angle as you are working. 85% of learning comes from seeing, so go slowly, and give the person plenty of time to ask questions. Explain why it is done this way and stress the key points and safe working methods. Repeat your demonstration until you feel sure each step is clearly understood.

Step 3 - TRY OUT - First have the trainee “instruct” you on doing the job ... telling you what to do and then talking you through doing the actual job. If the trainee’s instructions to you are complete and correct, then let them do the work while you observe and question. Correct mistakes immediately ... don’t give poor technique a chance to become a habit. Be patient and encouraging.

Developing skill is a matter of **DOING THE WORK, PLUS COACHING**. As the work is practiced, let the trainee know when it is done right and make corrections when it is not.

Step 4 - CHECK AND FOLLOW-UP - When job knowledge and skills gained are sufficient, put the trainee on their own. Reduce close supervision, but check the actual methods frequently enough to ensure continued safety, high quality, and high production work.

Be sure your trainee will ask questions as problems occur, rather than guessing or blundering along in each new situation. Your own attitude and behavior is the key to this. Make your trainee comfortable by not being annoyed or short, or stalling in your help. Answer promptly and fully.

The final result of your training will be a competent and enthusiastic line clearance professional in whom you can take real pride.

EDUCATION AND TRAINING SUBJECT OUTLINE

Here is a set of job items important to a safe and successful crew operation. Each crew member needs this background plus the training they will receive through the Line Clearance Training Certification Program.

A. Laborer

1. Job and Equipment HAZARDS
 - a. Electrical Hazard Training
 - b. Personal Protective Equipment Requirements
 - c. Clothing requirements
 - d. Lifting techniques
 - e. Never work under tree being trimmed.
 - f. Review pertinent safety poster material and the Incident Prevention Section of The Company's Foreperson's Manual.
 - g. Protection of pedestrians and pets.
 - h. Horseplay
2. Setting up the work site in accordance with company, State and Federal Regulations
3. Hand signals and their meanings.
4. Verbal "Commands" and their meanings.
5. Public and customer relations responsibilities
 - a. Behavior
 - b. Dress
 - c. Personal grooming
6. Rescue Breathing Techniques
7. Rescue: From Tree or Aerial Device
8. Hand Tools (pole clip, pole saw, hand saw, axe, sledge, wedge, tree paint, chain saws)
 - a. Names
 - b. Safe usage
 - c. Maintenance
 - d. Storage and inventory
 - e. Layout for climbers
9. Miscellaneous equipment, such as: water cooler, first aid kit, fire extinguisher, etc.
10. Ropes
 - a. Types and limits
 - b. Coiling, storage, and inspection
 - c. Care
 - d. Weather effect
 - e. Knots
 - f. Ground handling techniques
 - (1) raising tools
 - (2) lowering wood

11. Ladders
 - a. Safe usage
 - b. Inspection and maintenance
12. Trimming, cutting, piling large limb wood
13. Pulling Hangers
14. Brush Control prior to disposal.
15. Operation of Chipper
 - a. Personal Protective Equipment Requirements
 - b. Proper start and stop
 - c. Fueling (gas and oil)
 - d. Safe feeding techniques and feeding position
 - e. Machine limits
 - f. Truck hook-up and release
 - g. General maintenance and inspection
 - h. Cutter bar inspection
 - i. Blade change mechanics and hazards
 - j. Belt and sheave adjustment and hazards
16. Burning techniques (where permitted)
17. Area clean-up (rake, broom, and scoop shovel).
18. Operation and Maintenance of Power Saw
 - a. Personal Protective Equipment Requirements
 - b. Start, use, and stop techniques
 - c. Safe operating requirements
 - d. Fuel preparation and filling (gasoline and oil)
 - e. Care, adjustment, and maintenance of power unit
 - f. Care, adjustment, and turning saw bar
 - g. Care, adjustment, and sharpening of chain
19. Traffic Control
 - a. Placement of work signs, flags, paddle boards, and cones
 - b. Flag person responsibility and techniques
 - c. Warning trimmer of approaching vehicles or pedestrians
20. Truck Operation
 - a. Driving
 - b. Parking
 - c. Backing with chipper (always use another person to guide)
 - d. Dumping
 - e. Security precautions
 - f. Maintenance checks
 - g. Housekeeping standards
21. Aerial Device Operations at ground level
 - a. Use of wheel chocks
 - b. Operation of outriggers and outrigger pad placement
 - c. Knowledge of control knobs
 - e. Emergency rescue procedures
 - f. Manuals

B. Manual Climbers

1. Special precautions and requirements of working around conductors (electric hazard)
2. Selected First Aid Subjects
3. Review of safety poster material and The Company Foreperson's Manual section on "Climbing."
4. Ladder techniques:
 Carry, position, tie-in
5. Use of climbing saddle and safety straps
6. Knots: taut-line hitch, figure 8, bowlines, clove hitch
7. Climbing up (Ascending)
 - a. Techniques (100% Tie in Policy)
 - b. Planning the climb
 - c. Hazards and cautions
 - d. Use and sharpening of climbers (hooks)
8. Climbing rope use
 - a. Coiling and maintenance (protection from cuts)
 - b. Inspection
 - c. Skills:
 - (1) selecting a crotch for tie-in
 - (2) using a pole clip and other techniques for positioning rope
 - (3) techniques of moving around in tree: comfort, safety
 - (4) coming down (Descending)
9. Tree species identification
 - a. Wood strength
 - b. Weight of wood (roping safety)
 - c. Growth rate
 - d. Reaction to trimming/limits
 - e. Brush that is poisonous to grazing animals
10. Procedures to protect ground crews, passers-by and property
11. Use of pole clip (pruner)
 - a. Skills
 - b. Safety procedures
 - c. Pruning techniques
 - d. Maintenance and repair

12. Use of hand saw
 - a. Skills
 - b. Safety procedure
 - c. Releasing a bound saw
 - d. Maintenance
13. Limb removal
 - a. Methods of reducing limb weights
 - b. Hinge cut
 - c. Jump cut
 - d. Flush cut
 - e. Coordination of cut and control
 - f. Roping/Rigging Techniques
14. Special techniques used in safely removing limbs on, overhanging, or in close proximity to conductors
15. Roping and removing limbs.
 - a. Specialized knots and lashings
 - b. Fall lines
 - c. Snatch blocks
 - d. Bull lines
 - e. Guide lines/Tag lines
 - f. Selection of roping crotch
16. Trimming methods
 - a. Storm-proofing/dead wood removal
 - b. Round-overs
 - c. Stubbing
 - d. "Natural," lateral trimming, or drop-crotch
 - e. Planning the job
17. Safe use of Chain Saws up in trees
 - a. Methods to climb and come down with the saw
 - b. Cutting techniques in a tree
 - c. Maintenance and adjustment
 - d. Use and fueling
18. Tree removal
 - a. Topping techniques
 - b. Notching and felling cuts
 - c. Techniques to control direction of fall (wedge, ropes, etc.)
 - d. Estimating distances and tree balance
 - e. Protection of bystanders, crew, and property
19. Practice tree rescue techniques

C. Aerial Device Operators

1. The appropriate basic training as Manual Climbers with the addition of...
2. Review of The Company Foreperson's Manual sections on Aerial Device operation
3. Parking and locating truck and booms for safe and productive trimming.
4. Check-out procedures (safety) before entering bucket.
5. Use of ground, pedestal and bucket controls.
6. Hydraulic Tools
 - a. Hook up
 - b. Techniques
 - c. Maintenance
 - d. Repair
7. Emergency Procedures.

D. All-Terrain Vehicles (ATV)**E. Crane Operators**

1. The same training as Manual Climbers with the addition of...
2. Parking and locating for safe and productive trimming.
3. Check-out procedures (safety) before start-up.
4. Knowledge of weight and angle tables as well as load charts.

F. Stump Grinders

Intentionally Left Blank

What do the property owners and the general public think when they look at your crew? Their first impression of you and your workers is formed almost entirely by one factor-crew appearance!

This first impression, when it's a good one, makes it more likely you will get the cooperation of the owner.

Neat climbers and well-kept equipment show people that we are professional and deserve identification as "experts." On the other hand, dirty equipment and sloppy looking climbers are poor advertisements for the Company, for you as Foreperson, and for the individual crew member hoping to progress with the Company.

Crew appearance is made up of three elements:

1. Appearance of each person
2. Appearance of the equipment
3. The conduct and attitude of the crew

APPEARANCE OF THE CREW – The best looking and most practical uniform for the foreman and The Company trimmer consists of: boots, dark pants, a company long sleeve shirt, safety glasses and a hard hat.

Boots should have at least a 2 inch heel, rubber or composition soles to prevent slipping and to minimize injury to tree tissues. Hob nails and leather soles, on the other hand, break bark and expose the underlying tissues of the tree.

The company jerseys serve to identify our workers; they keep a crew uniform in appearance, and they save clothing by absorbing snags and tears that a more expensive shirt would not be able to stand. Company jerseys are inexpensive and practical. These items are available through your General Foreperson.

Hard hats and safety glasses and other PPE are provided for each crew member by the Company. Their purpose is to prevent injuries. Hard hats and safety glasses which are cracked or punctured shall be replaced immediately because they lose their protective properties after they are damaged. The hard hats also contribute to crew appearance. Crew Forepersons are provided with white hard hats which instantly identify them to property owners and the general public. *You should make an extra effort to keep your white hard hat clean and presentable.*

Additionally, it is understandable that clothing gets dirty due to the nature of the work, but there is no excuse for anyone to wear clothes which are seldom or never washed.

Your appearance, as Foreperson, is important. Our Forepersons make many contacts with property owners and the public in general, and for this reason, you should present a good appearance at all times.

It is up to you, as Foreperson, to set an example in dress and personal appearance. It is not enough just to set an example, however. You must also insist on the standards that are a matter of Company policy. It is Company policy that all crew members must wear hard hats, clothes and footwear that are appropriate for our work.

It is very desirable that all crew members wear The Company jerseys and you can do a great deal to promote the use of these jerseys by your crew members. Dark pants and boots are professional looking, practical and preferred. Having all crew members in identical color work pants adds to a professional appearance.

APPEARANCE OF THE EQUIPMENT – Appearance of equipment is becoming more and more important as our work becomes more mechanized... Our Company trucks are usually equipped with a dump body, a chipper, power saws, and, in many cases, an aerial device. All this equipment, if cared for properly, can add greatly to the appearance of your crew. On the other hand, poor equipment appearance will make any crew look unprofessional. Company decals are important, when decals become worn and non-legible, ripped or, have fallen off entirely, they shall be replaced. Check with your General Foreperson concerning the appearance of your equipment and to furnish decals.

In addition, to promote the professionalism of the Company:

1. **Upon receiving equipment, employees are required to inspect the decals and immediately report any alterations. An altered decal must be replaced with a new decal immediately.**
2. **No unauthorized stickers, decals, or magnetic stickers may placed anywhere on Company equipment.**

The General Foreperson and driver will be held responsible for any alterations to decals. If a Crewmember violates this policy, both the Crewmember and their General Foreperson will be subject to disciplinary action up to and including dismissal.

Wiping off the equipment daily and polishing it periodically are things that are always done on the best crews. There are always a few minutes during the day when the laborer is not busy with other duties, and those few minutes can work wonders with the appearance of your equipment.

WORK HABITS AND ATTITUDES – The work habits and attitudes of the crew are the last of the three factors that make up crew appearance. A hard working, energetic crew forms a good impression on all who see them. A slow, sloppy crew surely forms the opposite impression. Remember, it is up to you to set the standards and attitudes for your crew! The appearance of your crew is a direct reflection on you as Foreperson. Make that reflection a good one!

INTRODUCTION

Trees add beauty and value to property, and improve the quality of life in urban areas. Trees provide shade, supply vital oxygen to our atmosphere, remove carbon dioxide, build and hold soil, filter particulates, reduce storm water runoff, screen unsightly objects and provide habitat for wildlife.

However, it is important to recognize that trees growing in the wrong place can cause problems, especially if they affect high voltage power lines. You provide a valuable service by keeping trees clear of these lines, and helping the public understand the importance of our work in providing reliable electric service.

The Company's ability to provide professional line clearance services not only protect the value of fine trees but, also provides a vital competitive advantage when it comes to building and maintaining a high quality work force.

Your personal effort to become more knowledgeable about trees in the urban environment and to apply your experience is essential to maintaining our hard-earned reputation, and to reassure the public that their trees are being properly cared for.

OBJECTIVES OF PROPER LINE CLEARANCE

The following requirements are essential for the successful implementation of an effective line clearance program:

1. *Pruning must be done to the utility specifications, and where possible to the satisfaction of the property owner.* Trees must be pruned properly, taking into account the natural structure, expected growth, and overall health of trees whenever possible. The goodwill of the property owner is vital to our responsibility as a contractor, to each utility customer, and to assure future cooperation.
2. We must comply with all applicable tree maintenance regulations and work cooperatively with city foresters and governmental right-of-way managers.
3. Trees must be pruned to remove imminent hazards and to reduce potential future hazards to the lines. This pruning must be done in order to maintain continuous service to the utility's customers.
4. Pruning must be done in a safe manner to protect the worker, to prevent injury to pedestrians or bystanders, and to avoid damage to vehicles and property.
5. Non-employees, also known as pedestrians or home owners, are not permitted unsupervised inside our work sites. This is for their own safety as well as the safety of our employees. Our company principle of "We believe prevention of injuries is good business." supports keeping non-employees safe from the hazards of our work. It is everyone's responsibility to keep an eye out. Especially keep an eye out for children as they can be curious and not aware of the potential danger.
6. The cost of line clearance operations must be carefully controlled in order to provide our customers with the most efficient professional service possible.

The quality of our work must be constantly improved if we are to be successful in keeping and expanding our operations.

Your experience and leadership provide our utility customer with the assurance that The Company crews will maintain their right-of-way according to the industry's highest standards.

Our Company must have people who can provide the specialized service that the utility companies and the public demand. Each Foreperson must have a sound knowledge of the following line clearance fundamentals:

1. Identification of the electric hazards.
2. Safe work practices and procedures.
3. Proper climbing techniques and proficiency in the use of climbing rope, saddle, and other job related equipment.
4. How to tie essential knots.
5. Tree species identification.
6. Knowledge of electrical conductors.
7. Appropriate pruning methods, as defined by ANSI A300, Part 1, Pruning.
8. How to cut, lower and handle limbs.
9. How to operate and maintain a chipper.
10. How to operate and maintain an Aerial Device.
11. How to operate and maintain a chain saw.
12. Rescue techniques.

Additional knowledge of tree structure, the effects of insect and disease damage, and the growth characteristics of various species is desirable.

CLIMBING AND USING A ROPE AND A SAFETY STRAP

As a Foreperson you already have a good practical background of climbing experience. Use this as a review and as an aid in training your crew.

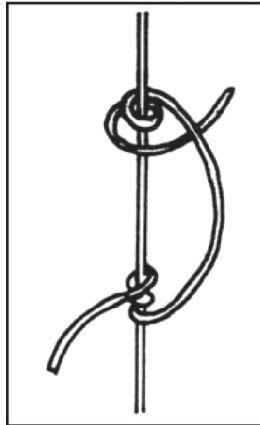
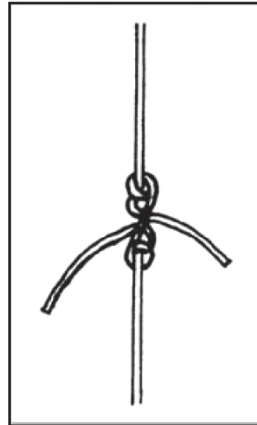
Climbing is more than the ability to go up or down a tree close to the trunk. You must be able to get above the work, using a crotched rope, and get around on limbs so as to allow the removal of those portions of the tree which could cause a service interruption.

When showing a new crew member how to climb, have them relax while climbing so that their legs and arms work together in reaching a point where they can work. Knowing how to use a rope and safety strap properly is the mark of a tree expert. Here are a few pointers.

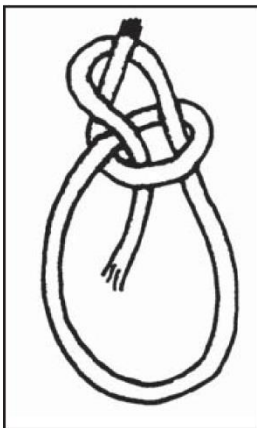
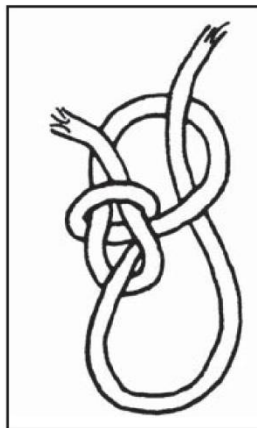
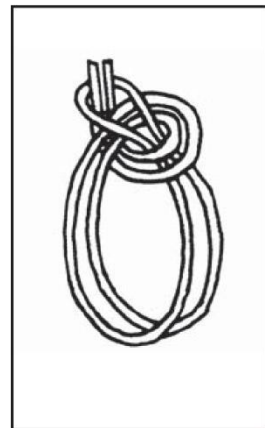
1. The climber shall be 100% tied in when climbing into and working the tree.
2. Crotch as high as possible above your work.
3. Crotch around a main leader-don't stake your life on a small branch.
4. Crotch to a leader other than the one being worked in whenever possible. Crotch so that, if you slip, you will swing away from the conductors -not into them.
5. Crotch as close to straight overhead as possible and try not to exceed a 30° angle. This helps control the swing, if you should slip.
6. Climb and work without slack in your rope.
7. Distribute your weight properly between your rope and the limb you are standing on. Use your climbing rope with confidence and keep in mind that the rope is more than strong enough to carry your weight. A climbing rope is the biggest single item in making work easier and is insurance against incidents. Your rope is a working aid as well as a safety measure.
8. Climber shall carry a safety strap(s) at all times while working aloft. The safety strap shall be used when:
 - a. The tree being climbed does not have enough limbs strong enough to safely support the climber's weight.
 - b. Climber gaffs (hooks) should only be used for removals and Palm trees or aerial rescue.
 - c. The tree being climbed does not provide an adequate crotch for a climbing line.
 - d. The climbing line must be untied for the purposes of recrotching the line, adjusting the taut line hitch knot or when the climber is experiencing trouble with any climbing equipment while in the tree.
 - e. Its use is necessary as a secondary hold, such as: when a climber is blocking down a stub, operating a power saw in close proximity to the climbing line, working out on a limb where a slip or fall could occur, or when double crotching may be needed for supporting the climber's weight.

KNOTS

The few knots essential to tree work are not hard to learn. They are illustrated and described on the following pages. Anyone familiar with these knots will find them adequate for the work that will be required. Learn them well and use them intelligently.

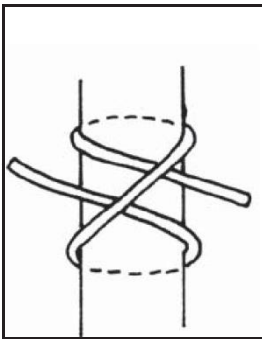
TAUT LINE HITCH**HOW TO TIE****COMPLETED**

Properly tied, the Taut Line Hitch permits the climber to move around a tree freely and safely.

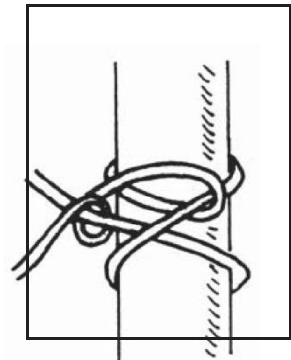
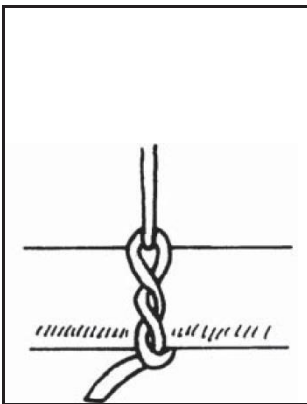
BOWLINE**RUNNING BOWLINE****BOWLINE ON A BIGHT**

The best all-purpose knot the tree trimmer can use is a BOWLINE. The bowline forms a loop knot in the rope that will not slip. The snap should be attached to the rope with a bowline.

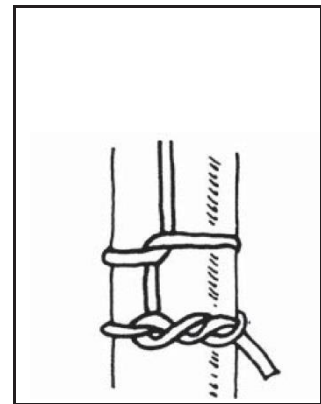
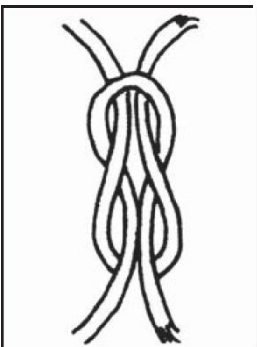
The RUNNING BOWLINE is not a slip proof knot for roping limbs. The running bowline should be tied where a limb can stop it from sliding.

CLOVE
HITCH

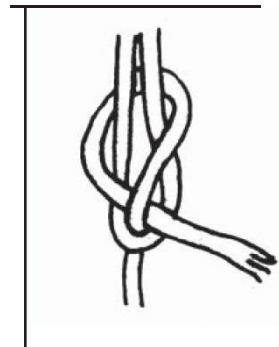
The CLOVE HITCH is useful for raising and lowering tools, but when it is used for lowering limbs it should be reinforced with two HALF HITCHES.

CLOVE HITCH
REINFORCED
with
HALF HITCHTIMBER
HITCH

The TIMBER HITCH is a useful knot for securing a rope to a large limb. Caution is advised when using a timber hitch because if a sudden strain is put on this knot or if the rope should become slack it may come untied. To guard against this possibility the timber hitch should be reinforced with a half hitch.

TIMBER HITCH
REINFORCED
with
HALF HITCHSQUARE
KNOT

Holds firmly and is easily untied. Is used to join two ropes of same size.

SHEET
BEND

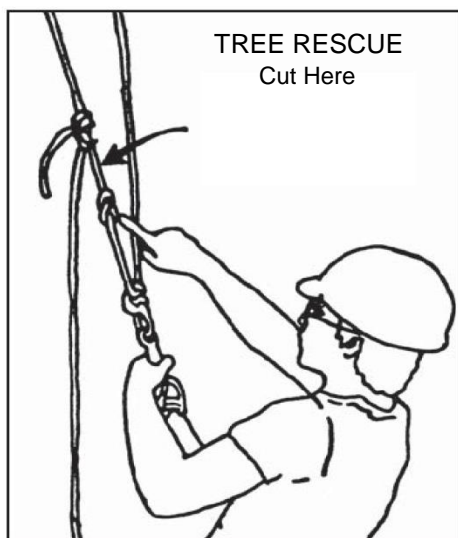
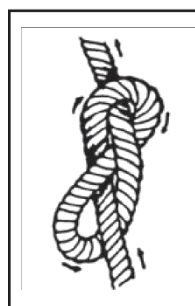


FIGURE 8



The FIGURE EIGHT knot shall be tied in the tail of a climber's rope -between the snap and the place where the taut line hitch is tied. The Figure 8 knot is a safety device in two ways:

1. If a climber receives a shock and becomes unconscious they must be cut down and lowered as quickly as possible. The Figure 8 knot positively identifies the rope to be cut.
2. The Figure 8 also holds the ropes apart so that the pole clip can easily be inserted to make the cut between the Figure 8 and the Taut Line Hitch. It is a constant reminder to the climber of the electric hazard.

CUTTING, LOWERING, AND HANDLING LIMBS

THINK BEFORE YOU CUT- All too often line clearance is carried out with only the present in mind. More consideration should be given to future trimming. Small trees just getting established should not be pruned. Limbs that are going to be constant offenders should be taken off at the junction of the parent branch growing away from the line, (See Natural Pruning). You should realize that pole pruner clearance is generally not the best clearance.

OVERHANG-The removal of overhang is often specialized. It cannot properly be handled with a long pole pruner from underneath the wires. Two methods are workable in removing overhang. First is to come down into the overhang from a well-chosen crotch. Get out on the limb to be taken off and remove the weight of branches and foliage. Work back along the branch taking pieces only large enough to be handled easily. This method eliminates the need for excessive ground work and the tendency to take too much at one time. A little more climbing and removal of smaller pieces eliminates the possibility of large pieces getting out of control and endangering the line or the laborer.

The other removal method is to rope the overhang to a crotch away from the wires. Undercut until the laborer can pull it to the crotch, finish the cut and have it lowered to the ground. You must be certain that the crotch chosen will carry the weight of the limb to be removed, and that the limb will pass the wires safely once it is cut off; also be sure that the weight of the limb is fairly well balanced on the rope or tied out far enough to permit the butt to hang down. A butt line shall be used to prevent the heavy end from swinging either into the wires or against the climber causing an incident. This butt line also is useful for guiding the limb to the ground. On large limbs it may also be necessary to remove branches carrying foliage to allow better handling.

MAKE CUTS IN ORDER SHOWN

The importance of knowing where each limb is going to fall cannot be overemphasized. Plan each cut so you know where it will fall and how you will handle it. If the piece to be removed is too large for hand work, rope it.

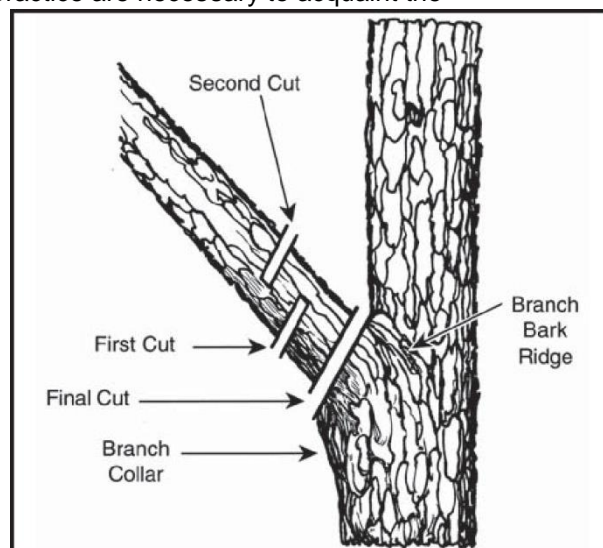
INITIAL CUTS—There are only two means of cutting branches: cutting from one side until the weight of the branch rips it off or jump cutting so the branch falls off clean without any ripping. Both methods are useful and can be utilized under different circumstances. In all cases the initial cut for branch removal is made from 12 to 24 inches from the point of the final collar cut. It is always best to throw a limb the way it leans. Branches cannot be jumped or thrown away from a severe lean unless roped. Jump cutting is more predictable when weight in the forms of boughs and foliage has first been removed. Experience and practice are necessary to acquaint the trimmer with cutting reactions and the breaking point or holding capacity of various species of wood.

Usually the best way to remove a limb and know where it's going is to use a jump cut. The first cut goes into the limb or branch on the side the limb is to be thrown from, one-fourth to one-half the distance through. Another cut is then started on the opposite side from 1 to 3 inches above the undercut and followed through until the cuts overlap. The distance between cuts and the distance of overlapping will depend on the size of limb and the type of wood. If the limb is in an upright or nearly upright position, the saw can be removed and the trimmer can push or break the limb off and control where he wants it to fall with accuracy.

Be sure all “hangers” are pulled from tree crown.

FINAL CUTS - Historically, final cuts were made flush with the parent limb or with the trunk. However, this is no longer acceptable practice.

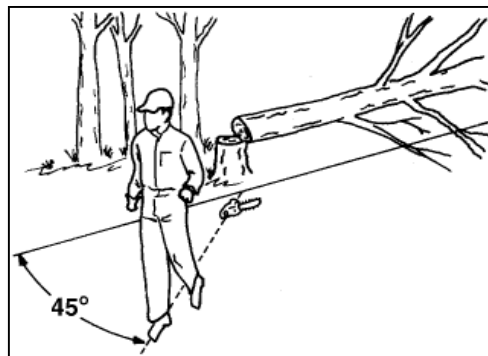
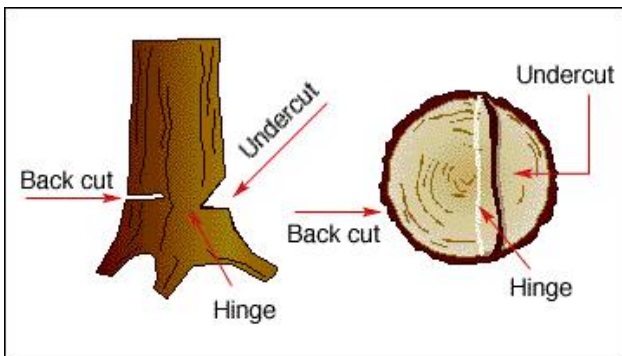
Research by Dr. Alex Shigo of the U.S. Forest Service into tree wound “compartmentalization,” a natural process that helps seal-off the tree from decay, lead to the development of the collar cut, which calls for a primary cut to be made at the branch collar, avoiding contact with the branch bark ridge.



REMOVALS - Where property, utility lines, and persons on the ground will not be endangered, trees can be dropped in one piece. Often however, the situation is not that simple. Congested conditions require that the tree be topped before the trunk can be removed. Under certain circumstances, the trunk itself must be removed in sections. A common error is trying to remove sections which are too large. This can result in broken wires, property damage and injury to crew members.

Here are some good rules to follow when removing trees in congested areas:

1. Crotch pull rope near the top of the tree and remove limbs starting at the bottom of the crown and working toward the top. In this way limbs will fall to the ground and will not become caught in lower branches.
2. If there is any doubt about whether a limb will clear the wires or property on the ground, a bull rope should be used to lower the limb. Also, if directional control is required, a guide line should be used. Very large limbs may have to be lowered to the ground using two bull ropes suspended from separate crotches while also utilizing an additional guide line.
3. When branches are removed, conditions may permit the trunk to be dropped in one piece. Often, however, it is necessary to remove the trunk in a number of sections. Damage to streets, sidewalks and lawns can be minimized by making a crib of limbs for the trunk to fall on.
4. When required, the final stump cut should be made as flush with the ground as possible.
5. A difficult removal requires more judgment on the part of the foreperson than other phases of line clearance. Experience and good judgment must be combined to make your removal operation safe and efficient.



TREE REMOVAL CUTS

TREE IDENTIFICATION

EVERY CLIMBER MUST BE FAMILIAR WITH THE TYPE OF TREE BEING CLIMBED; HIS/HER PERSONAL SAFETY DEPENDS ON KNOWING THE WOOD CHARACTERISTICS FOR THAT TREE. What the climber doesn't know may hurt them!

Tree identification is not difficult or hard to understand. If you use your power of observation as you work, very little formal study is necessary to get essential tree knowledge. Many good tree people who have excellent knowledge of tree species have learned only by contact and observation in their field work. Your climbers need to know whether a Silver Maple is as strong as a Red Maple, or whether all oaks will carry weight as well as a Pin Oak. If your crew members are encouraged to notice the details of the trees they work in, the identification of the common trees will become quite easy for them.

A single typical tree feature is usually not enough to make identification certain. Twig arrangement, buds, shape, bark, leaves, flowers, and fruit all help to be accurate.

When you get to recognize individual tree species, then rooting habit, soil preference, insect susceptibility and other facts of importance will also become easier to learn and understand.

A good crew can make tree identification simple and enjoyable by quizzing each other on the names of trees climbed each day. It becomes a competitive game which does not interfere with work and actually makes it more pleasant and understandable.

As Foreperson, you are responsible for seeing that your crew members learn and apply their knowledge about the different species of trees and their characteristics.

IDENTIFYING HAZARD TREES

For information on hazard trees, please refer to the *“TCIA Pocket Guide Identifying Hazard Trees”*. This pocket guide contains the following information:

- 1) Communication
- 2) Specialized Equipment
- 3) Tree Examination for Climbers: Roots
The Stem Limbs
- 4) Defects
 - Peeling Bark
 - Sapwood Decay
 - Hollows and Decay
 - Dead Branch Decay
 - Cracks
 - Woodpecker Damage
 - Borers
 - Cankers
 - Root Loss
 - Ground Heaving
- 5) Special Hazards Storm Damage Ice
Wet Limbs, Wind throw, Lowering Limbs & Palms
- 6) Non-Tree Hazards Electric Wires
Bees, Wasps, Animals Support Cables



KNOWLEDGE OF ELECTRICAL CONDUCTORS

A Foreperson must have a basic knowledge of electrical conductors to perform this job efficiently and safely. The higher voltages require considerably more clearance than the lower voltages. Since line construction techniques and voltages vary so widely throughout the country, no attempt will be made here to go into detail. Nevertheless, it is important that you be absolutely certain as to what you are working on at all times and trim accordingly.

Conversations with linepersons from the utility you work for can greatly increase your knowledge of the conductors/voltages you are working around.

TYPES OF PRUNING AND PRUNING METHODS

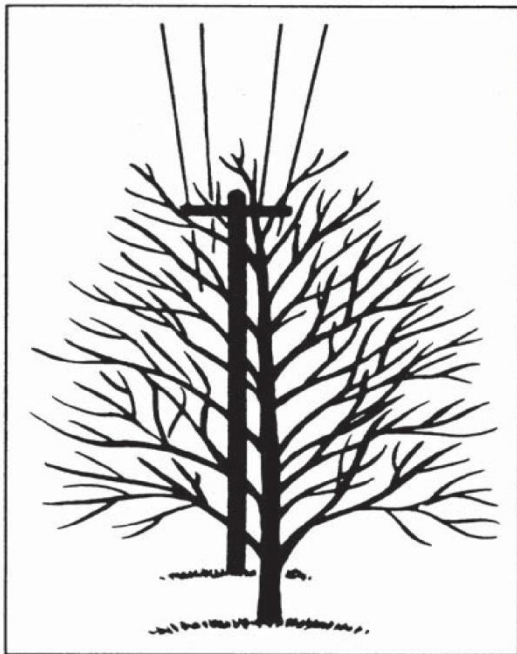
Each tree and each location present a different pruning situation. As Foreperson you must be familiar with the various types and methods of line clearance, so that you can apply them in the various situations you encounter.

The four most common types of pruning are described on the following pages.

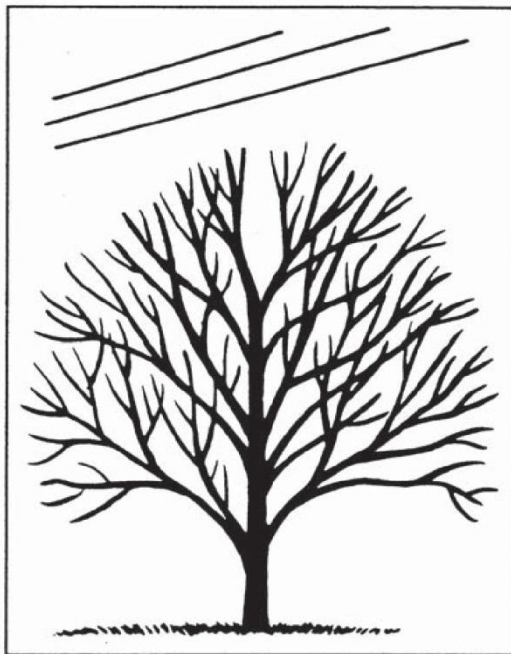
1. CROWN REDUCTION

Crown Reduction involves cutting back large portions of the upper crown of the tree. Crown Reduction is often required when a tree is located directly beneath a line. The main leader or leaders are cut back to a suitable lateral. (The lateral should be at least one-third the diameter of the limb being removed.) Most cuts should be made with a saw; the pole pruner is used only to get some of the high lateral branches.

For sake of appearance, to minimize sucker growth, and to minimize stress caused by severe pruning, it is best not to remove more than 25% of the crown. However, circumstances may require removal of greater percentages. Line clearance operations must achieve utility clearance objectives.

CROWN REDUCTION

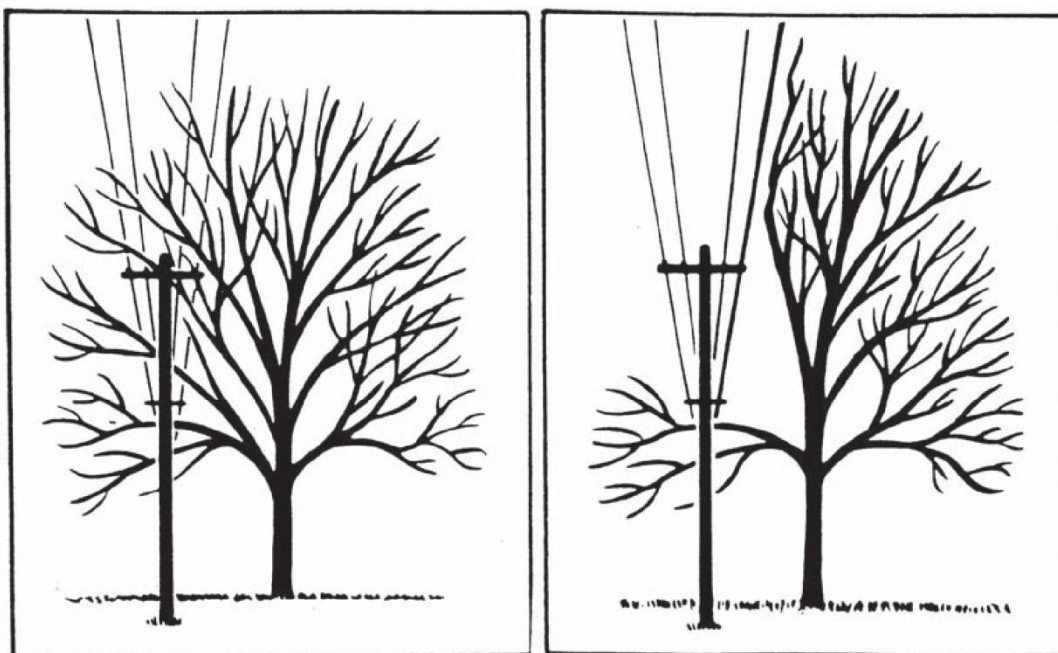
Before Crown Reduction



After Crown Reduction

2. SIDE PRUNING

Side Pruning consists of cutting back or removing the side branches which are threatening the conductors. Side pruning is required where trees are growing adjacent to utility lines. Limbs should be removed at a lateral branch. Unsightly notches in the tree should be avoided if possible. When pruning, remove all dead branches above the wires, since this dead wood could easily break off and cause an interruption.

SIDE PRUNING

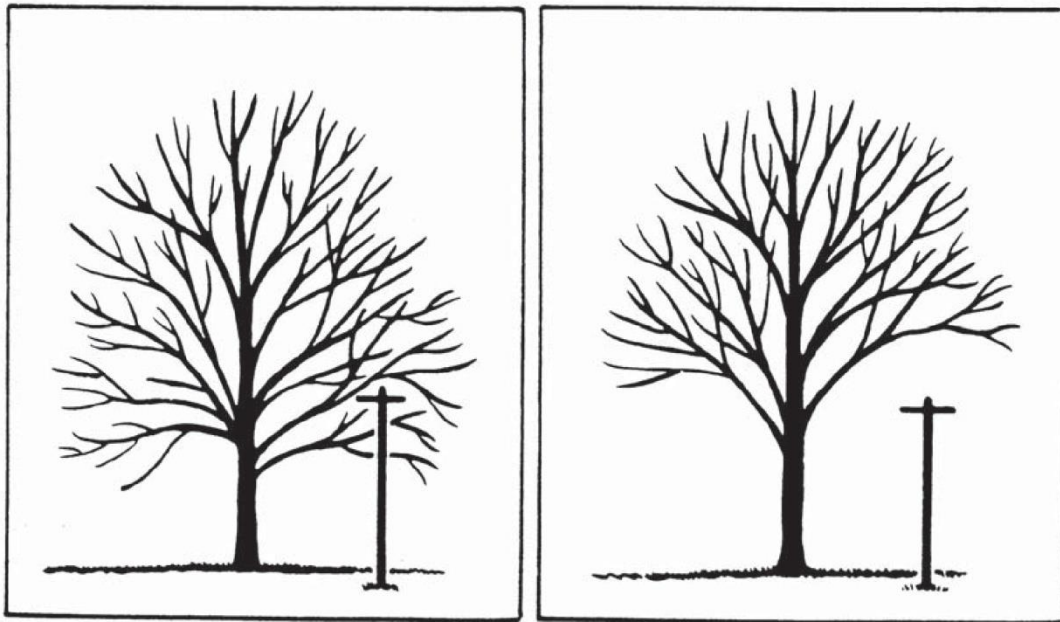
Before Side Pruning

After Side Pruning

3. UNDER PRUNING

Under Pruning involves removing limbs in the lower crown to allow wires to pass unobstructed through the tree. To preserve the desired shape of the tree, lower limbs on the opposite side of the tree should be removed as well. All cuts should be made at the branch collar. The natural shape of the tree is retained in this type of pruning and the tree can continue its normal growth. Overhang can be a hazard, however, when a line passes beneath a tree, overhangs should be removed in accordance with the species of tree, location, and the general policy of the utility that you work for. When pruning, remove all dead branches above the wires, since this dead wood could easily break off and cause an interruption. Many utilities have a removal program set up for trees which overhang important lines.

UNDER PRUNING



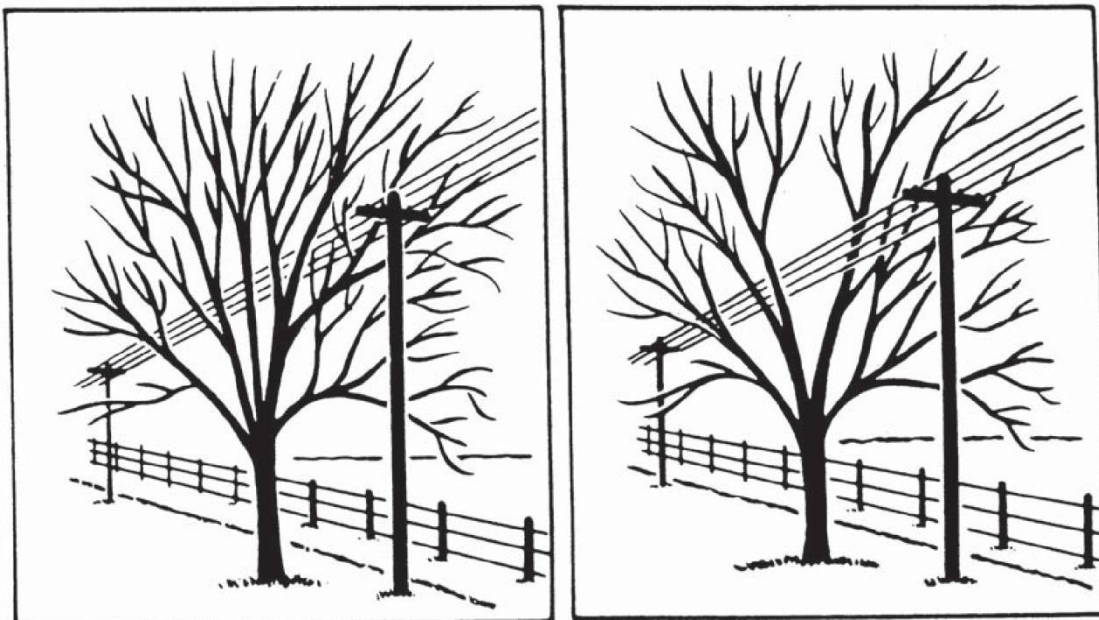
Before Under Pruning

After Under Pruning

4. THROUGH PRUNING

Through Pruning calls for the removal of branches within the crown to allow power lines to pass through the tree. It is best suited for secondaries, street light circuits and cables, although it is sometimes specified on primary circuits. Cuts should be made at crotches to encourage growth away from the lines.

THROUGH PRUNING



Before Through Pruning

After Through Pruning

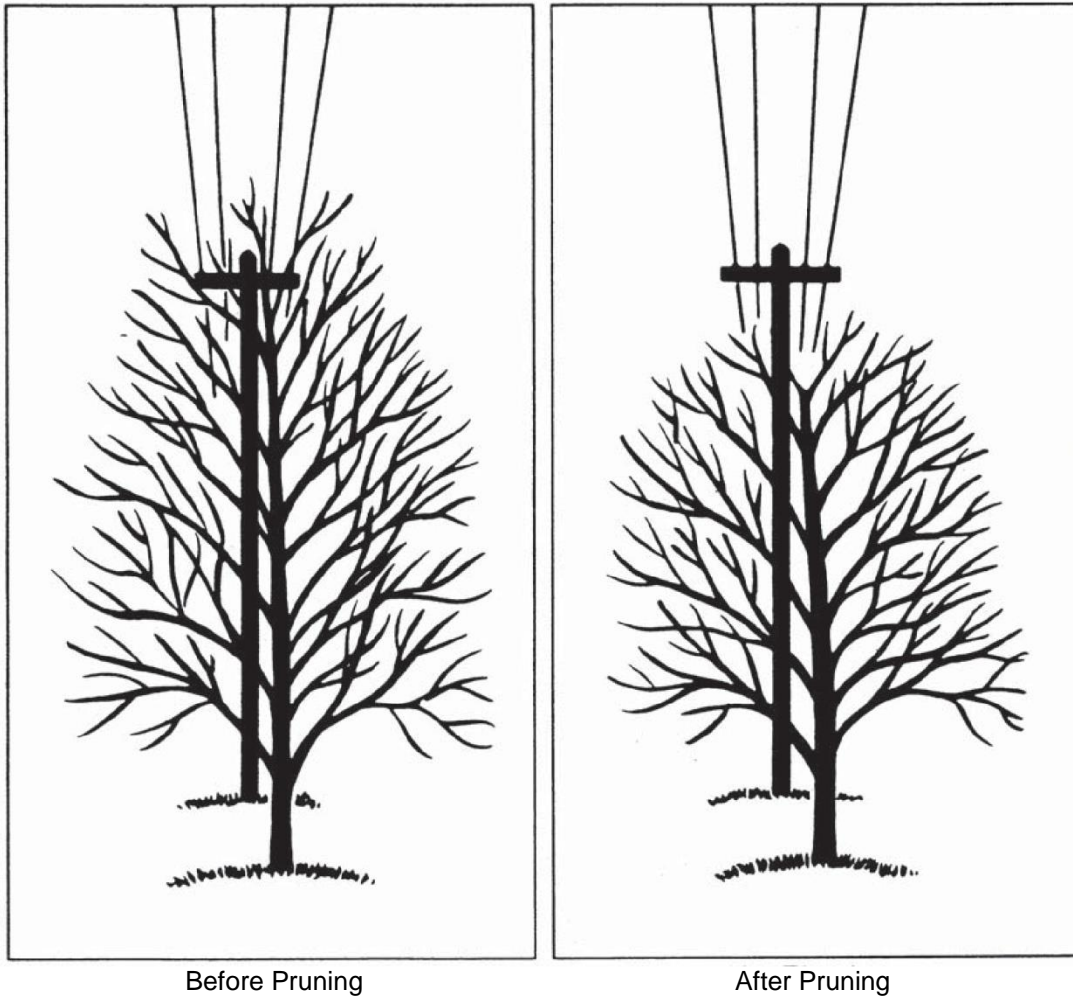
5. COMBINATIONS

Combinations- It is often necessary to combine several types of trimming in order to get a good looking job and provide adequate clearances.

METHODS OF PRUNING

There are various tree pruning methods, but not all are attractive, beneficial to the tree, or provide optimum line clearance. A brief outline of pruning methods and Company policy in regard to them follows.

It should be emphasized, of course, that we must trim the way our customer, the utility company, wants us to. When a utility specifies certain standards and techniques for tree work, they then become our standards and methods. Sometimes a property owner wants a tree trimmed in a certain way and generally can be accommodated. However, in many cases, the trimming methods are decided by our Company. The following are desirable and undesirable methods as far as Company policy is concerned.

*Desirable Method***CROWN REDUCTION BY NATURAL PRUNING**

Before Pruning

After Pruning

Natural Pruning - Natural pruning is a method by which branches are cut back to the collar of a suitable parent limb closer to the center of the tree. This method of trimming is sometimes called "drop crotch" or lateral trimming. Large branches should be removed to laterals at least one-third the diameter of the branch being removed. Natural trimming is especially adapted to the topping of large trees where a great deal of wood must be removed. In natural trimming, almost all cuts are made with a saw and very little pole pruner work is required. This results in a natural looking tree when finished, even if a large amount of wood has been removed.

Directional pruning is a form of natural pruning that guides growth of the tree away from the wires. Stubbing, on the other hand, tends to promote rapid sucker growth right back into the conductors. The important factor to remember is that natural pruning does work and that two or three pruning cycles completed in this manner will bring about an ideal situation for both the utility and the tree owner. Most shade trees lend themselves easily to this type of trimming.

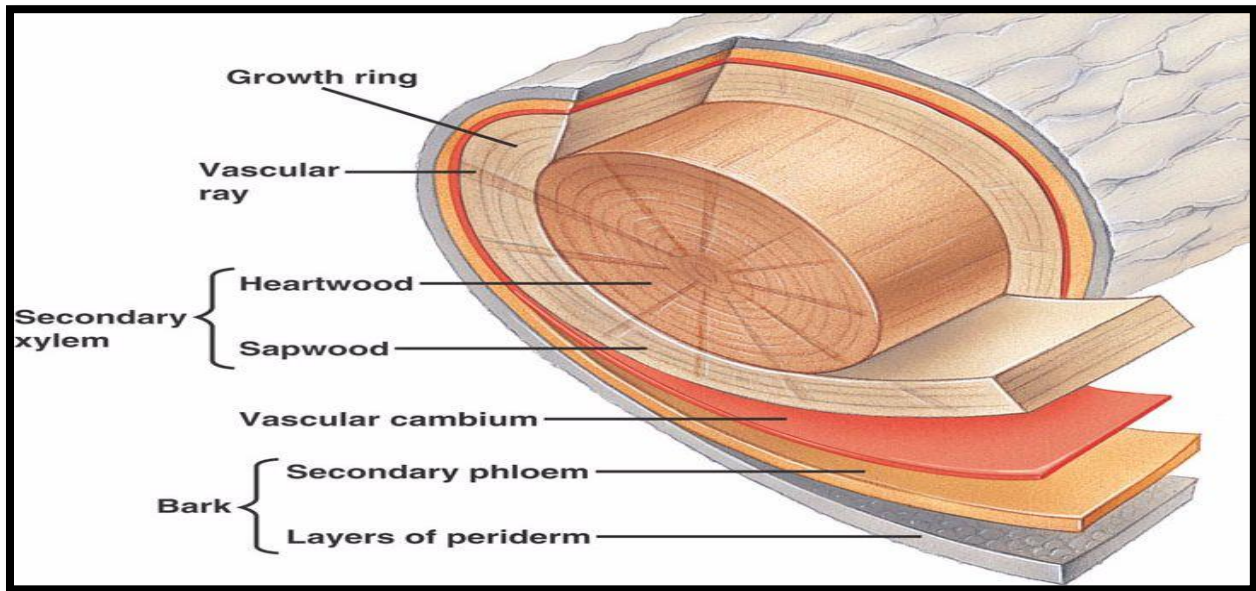
Undesirable Methods**POLLARDING AND SHEARING OR ROUNDING OVER**

Pollarding - Severely heading large-growing deciduous trees, either annually or every few years, in order to maintain a limited crown size or achieve a formal appearance in the landscape. This technique is both labor intensive and inappropriate for use as a line clearance technique.



Shearing or Rounding Over – Rounding over is done by making many small cuts so that the tree top is sheared in a uniform line. This creates an unhealthy tree condition and results in a rapid regrowth directly back toward the electrical conductors.

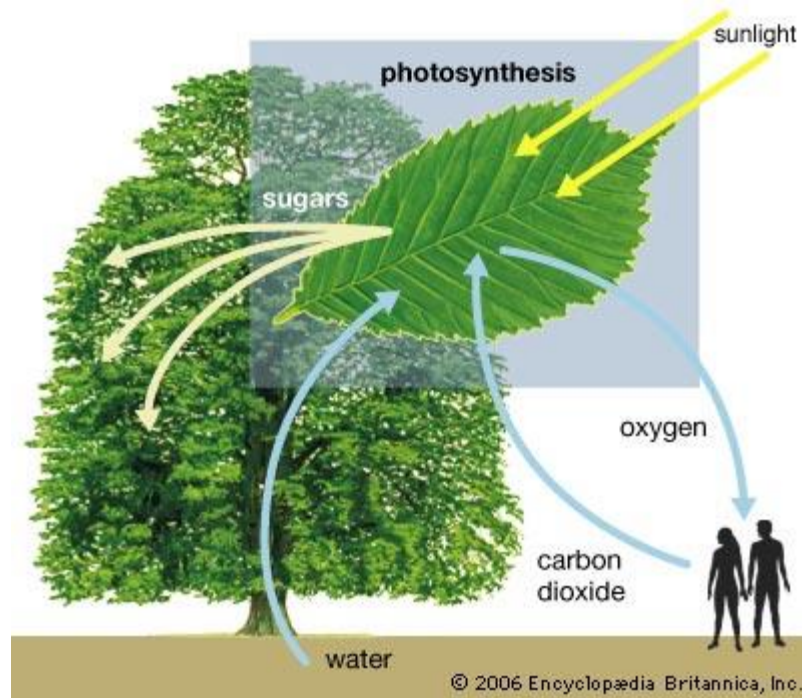
NOTE: A utility company may require pollarding or shearing in certain cases.



TREE GROWTH FUNDAMENTALS

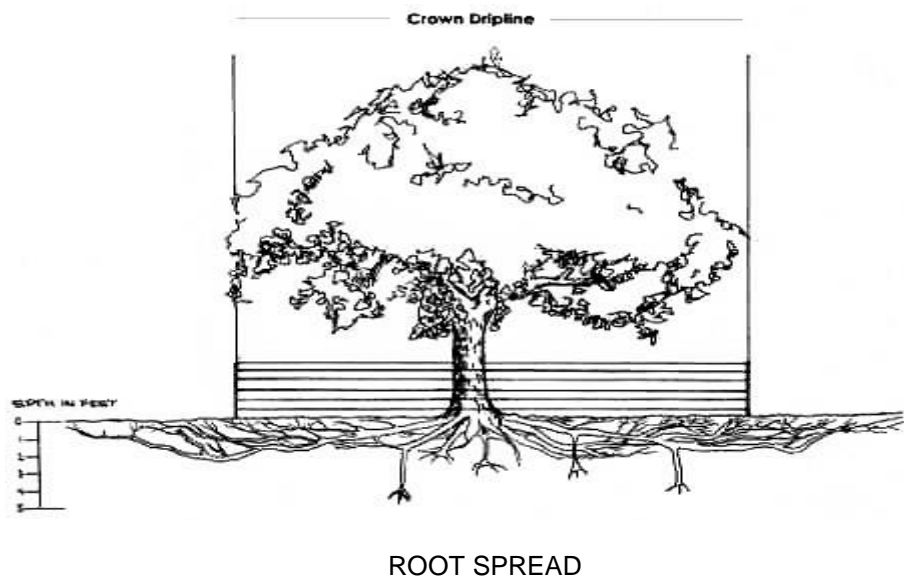
The stem or TRUNK of a tree serves as support for the branches and crown, the conduction of nutrients and water, and the storage of food materials manufactured by the leaves.

LEAVES convert water and nutrients absorbed by the roots into sugars and starches. Chlorophyll, the green pigment in the palisade cells and spongy cells, manufactures these elaborated foods in the presence of sunlight. Excess moisture is released as vapor through the tiny pore openings called stomata.



WHAT A TREE NEEDS TO LIVE

The ROOT SYSTEM serves to anchor the tree, to absorb moisture and nutrients, and also to store food materials manufactured by the leaves. The root system of a tree may extend a great distance beyond the spread of the branches. This system may be either a lateral spreading type or a deep penetrating type with a tap root, depending upon the species and growing conditions.



TREE TROUBLES - DIAGNOSIS

Successful treatment of any health problem of trees depends on correct diagnosis of the ailment. Some troubles occur commonly and are easily diagnosed, others are complex and may involve several causes.

If you are not sure of the specific tree trouble -DO NOT GUESS. Should a diagnosis be necessary, secure competent advice and assistance. If you cannot secure such assistance in the field, notify the Home Office. This is a difficult science, even for the experts. Remember, an incorrect diagnosis or a bad guess can make you look more foolish than admitting you need time to do some checking or that you don't know.

The following steps may be helpful:

1. Identify the tree
 - a. Compare with normal appearance and characteristics
2. Locate where the problem is occurring on the tree
 - a. Check requirements -weather, soil tolerance, other environmental factors
3. Observe health of other nearby trees
4. Learn tree's life history (Ask questions!)
 - a. Determine age or when planted
 - b. Previous treatment (i.e., fertilization, sprays, pruning)
 - c. Severe weather (i.e., hurricane, drought, cold, lightning)
 - d. Environmental changes (i.e., termite proofing of nearby house, fumes, changes in grade or drainage, excavations for service connections or repairs.)
5. Examine leaves (easy to get to and react early to problems)
 - a. Color and condition (along veins, at margins)
 - b. Size
 - c. Abnormal appearance- scorched, curled or distorted, galls, holes, skeletonized.
 - d. Evidence of insects or fungus fruiting bodies
6. Examine twigs and branches
 - a. Annual growth
 - b. Size and vigor of buds
 - c. Insect or disease (i.e., scale, aphids, twigs girdled, sap wood streaked, cankers)
 - d. Scars of old wounds -age, amount of callus
 - e. Amount of dead wood, split or interfering branches
7. Examine trunk and bark
 - a. Cavities or structural weaknesses (checks, shakes)
 - b. Loose bark, sunken or dead areas-determine cause, extent and severity of decay or girdling
 - c. Any swollen areas
 - d. Evidence of borers, ants or beetle galleries (small holes, sawdust, etc.)
 - e. Check for galls, water sprouts, frost cracks, fluxing or bleeding, fungus forms
 - f. Proximity to curb and sidewalk (salt applied over a period of years for ice and snow)
 - g. Use increment boring tool to examine condition of wood and annual growth rings

8. Check root area (very important -do not overlook)
 - a. Structural weaknesses or decay
 - b. Roots severed or girdled
 - c. Diseases or insects in soil (i.e., shoestring fungus or nematodes)
 - d. Rodent damage
 - e. Injury from gas leak, lightning, toxic chemicals
 - f. Aeration and moisture condition
9. Examine soil
 - a. Drainage depth and distribution of soil, hard pan, rock
 - b. Texture and organic matter
 - c. Compaction
 - d. Available nutrients and degree of acidity

Suggested tool kit for diagnosis: small shovel, pruner, hand lens, mallet and chisel, knife, increment borer, glass jars or plastic bags to collect samples of insects, leaves, twigs, bark or soil.

For more information about the care of trees in general, including disease management, and for books and other publications, contact your local county agricultural extension service, or your local chapter of the International Society of Arboriculture (ISA).

WILDLIFE CONSERVATION

Trees and brush are often prime wildlife habitat. Most wildlife is protected by federal, state or local law. All native bird species are protected by the **Migratory Bird Treaty Act**, a federal law. Pigeons, starlings and English sparrows are the only common birds NOT protected. *It is important to avoid any undue disturbance of protected or endangered wildlife species!*

As part of your routine job inspection, look for signs of wildlife, especially birds nesting or roosting. If you notice obvious signs of nesting or roosting either before or after starting work, stop and contact your supervisor. Continue working only if you can do so without disturbing the wildlife. Below are some common signs to watch for:

- Eagles, hawks and other birds of prey often nest atop tall trees with dead or dying tops. Nests are usually platforms made from sticks.
- Hollow trees and branches provide shelter for many species of birds and mammals. Watch carefully for trees with cavities, and look for droppings and other debris under the opening, indicating that the cavity is occupied.
- Bird nests are often found in sheltered crotches of trees. If you see a nest with birds or eggs present, do not disturb it.
- Utility rights-of-way are heavily used by wildlife. When operating in these areas, be on the alert for bird nests on the ground or in the brushy tops of low growing plants. Be aware that young deer and other animals are often hidden in these same thickets.
- Spring and summer are the most likely times to encounter nesting wildlife. Be especially careful during these times.

Additionally, be aware of the following rules regarding interaction with wildlife:

- Never attempt to touch, harass, capture, shoot or transport **any** wildlife. Such activities are illegal without special permits or licenses. By law, wildlife is regarded as the property of the state or federal government.
- Be aware that handling wildlife is not only illegal, but dangerous. Diseases such as rabies, bubonic plague and psittacosis can be transmitted through bites or other contact with animals and their droppings.
- Though wildlife may be encountered in any location, be especially sensitive in wetlands, parks, wildlife refuges, national forests and other protected areas.
- If during operations you accidentally disturb wildlife, stop work and contact your supervisor immediately.

Violation of this policy will result in disciplinary action.

MIGRATORY BIRD TREATY ACT

Federal and state laws require us to make immediate notification and/or record encounters with migratory birds.

Dead Birds: If you encounter a large dead bird near electrical structures immediately call your Supervisor for instructions. If you encounter a small dead bird near electrical structures, please bury the bird and call your General Foreperson if you need assistance.

Nests: If you encounter and need to disturb large nests of birds such as EAGLES, OSPREY, OWLS, or HAWKS, immediately call your General Foreperson for assistance. If you encounter and need to disturb small bird nests with eggs and/or young birds during the nesting season (February through June), carefully relocate the nest to an adjacent area and report the encounter to your General Foreperson. Inactive small bird nests

(nests without eggs and young birds) can be removed without assistance.

NEST MANAGEMENT

A permit issued by United States Fish and Wildlife Service (USFWS) may be required before managing an active nest. If a problem with a specific nest is anticipated, permit requirements may be avoided by removing the nest or taking the appropriate action during the non-breeding season while it is inactive (excluding eagles and endangered species).

The breeding season and dates when nests may be active varies by location and species, but for most North American raptors falls between February 1 and August 31. However, a nest is considered active only when eggs or young are present.



STORM EMERGENCY

No work situation is more vital to continued employment and customer relations than our prompt, effective response to help a utility put people's service back on when it is interrupted by wind, snow or ice.

Every employee has the responsibility to react quickly and cooperatively when our crews are assigned to storm work. When you are called out on emergency, it is company policy that you report for work. Failure to do so, without a valid excuse, will result in discipline and possible discharge.

BEFORE such a storm emergency, be sure to establish a reliable method of contacting each of your crew personnel.

TO MAKE SURE YOUR CREW IS PAID CORRECTLY AND IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS:

1. Keep a written record of all activities from the time you are called out until you return.

You must record:

Instructions given to you: location of emergency, *utility contact* name, address, and phone number; local *utility person*, address, and phone number.

Time Record: when you are called; crew departure; arrival at destination; (daily) start work, stop work; when released; when you reach home base, etc.

Special: items necessary for billing/payroll purposes, such as: lodging, meals, tolls.

1. Call your General Foreperson to report in.
2. Pack enough CLOTHING such as: rain protection, boots, and cold weather gear.
3. Get necessary ROAD MAPS.

4. Before starting out, gas the truck and extra fuel cans, if needed. *Unless* expressly told to take it, unhook the *chipper*, and remove the ignition key.
5. Do not Prepare "CONVOYS", although it may help to group 2 to 3 crews, AS LONG AS THERE IS NO DELAY IN STARTING. (In the past, large convoys have slowed starting and caused lost time on the way).
6. When traveling to an emergency area outside your utility area, WHENEVER YOU STOP FOR GAS OR A MEAL, HAVE AN EQUIPMENT BREAKDOWN, OR ANY OTHER PROBLEM, CALL IN your location to the *local* General Foreman.
7. One to two hours before your estimated arrival time, Call your General Foreman to confirm final instructions.
8. Remember, the people who have lost their electricity are counting on you. DON'T WASTE ANY TIME.
9. ON ARRIVAL, record the name, time, location, and phone number of the Utility person to whom you reported.
10. When the storm utility RELEASES your crew, *always* report in first to your General Foreman for information or instructions.
11. You must follow the Company and Utility policies and procedures (hours, safety practices, work rules, etc.). If these cause problems or questions, check with your *immediate General Foreman not the utility customer*.

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Storm Work / Scheduled Outage Policy for Line Clearance Tree Trimmers

In order to promote the highest level of safety and to prevent electrical contact from energized conductors, the following FOUR Steps shall be followed by Company Line Clearance Tree Trimmer (LCTT) employees:

1. Work all utility conductor(s) as if they are energized ("HOT"). This shall ONLY be performed with Non-Conductive * tools when tree parts are inside the Minimum Approach Distance (MAD) with the LCTT employee positioned outside of MAD **or**;
2. If the work cannot be performed safely as "HOT", then the utility conductor(s) shall be made safe to work by being de-energized (isolated), tested and grounded in accordance with the Utility Company's Procedure.
3. Once the utility conductor has been made safe to work, employees may perform work with conductive tools within MAD. This is still a NO CONTACT situation. (*See exceptions below*) **and**;
4. Grounds shall be visible to the employees actually performing the work.

Notes:

- If the grounds are not visible to the employees actually performing work on utility conductors, a method to prevent anyone from removing the grounds must be in place. Examples include but are not limited to: an employee stationed in sight of the grounds, use of mutually agreed Lockout / Tagout procedures or other method as approved.
- ONE set of grounds bonded to the neutral is usually acceptable on either side of the work. If grounds cannot be bonded to the neutral (because of an "open neutral" or because of storm damage), then all work within MAD must be performed BETWEEN grounds – which would then be tied to a non-system ground. If the utility conductor is broken, it must be bonded to the grounded circuit or isolated from the work area.
- Employee exceptions for contacting utility conductors: When conductors have been made safe to work: (1) a rigging rope(s) may be used to hold down electrical wires or tree parts to prevent inadvertent tension release when removing tree parts; and (2) non-conductive tools may be used to clear wires from tree parts being trimmed if the wires present a greater hazard if not removed.
- Company LCTT employees are recognized as the professionals and authority when it comes to the art and science of pruning and removing trees, particularly those trees contacting or within minimum approach distances of energized conductors.
- Company LCTT; are the only ones who can examine a tree situation involving contact or minimum approach distance violation with energized conductors, and make a determination as to whether the tree can be safely pruned or removed, while considering both OSHA regulation and Company policy.
- Company Foreperson's Manual, Section 11, titled Working Safely around the Electric Hazard, on Page 11-9, paragraph D states:
"Should any question exist as to whether or not any particular electrical hazard situation can be handled safely, the power company (or system owner/operator) shall be asked to make the conductors safe, and no work shall be attempted until conductors are made safe. Contact your general foreperson"

Non-Conductive Equipment

- include:
 - Wood Pruner Pole
 - Fiberglass Pruner Pole
 - Hydraulic Pole Chain Saw
 - Pruner
 - Hydraulic Pole Circular Saw
 - Hydraulic Pole
- Conductive Equipment include:
 - Any tool or equipment not listed above as non-conductive is to be considered conductive.

(Conductors have been made safe to work. De-energized (isolated), tested and grounded.)



Note (A) – One set of grounds may be used when conductors are intact.

Note (B) – The open fuses may be several spans away, creating isolation. If the grounds are not visible to the employees actually performing work on utility conductors, a method to prevent anyone from removing the grounds must be in place. Examples include but are not limited to: an employee stationed in sight of the grounds, use of mutually agreed Lockout / Tagout procedures or other method as approved.



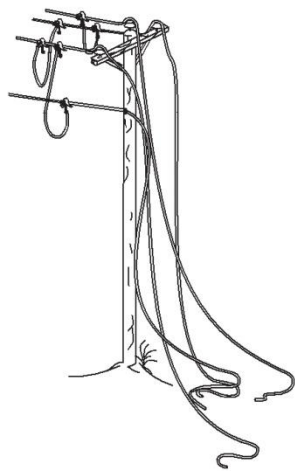
If mistakenly energized by generator back feed or other energy source, the conductors that are connected will all become momentarily energized until the grounds cause the energy source to trip. Field tests have shown one set of grounds is safe.

Note (C) – A second set of grounds brings little additional grounding value if the line is intact. In this case, one set of grounds is minimum company expectation. However, specific company and utility policy may require ALWAYS working between grounds – no matter what. Field test have shown both methods are safe.

Note: The diagram above is showing only one set of grounds in this case when all conductors are in tact.

(Conductors have been made safe to work. De-energized (isolated), tested and grounded.)

GROUNDS



(D)

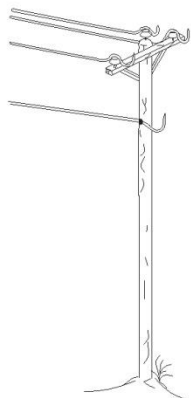


GROUNDS



Note (D) – Grounds are needed on both sides when conductors are being worked and not isolated.

(E)

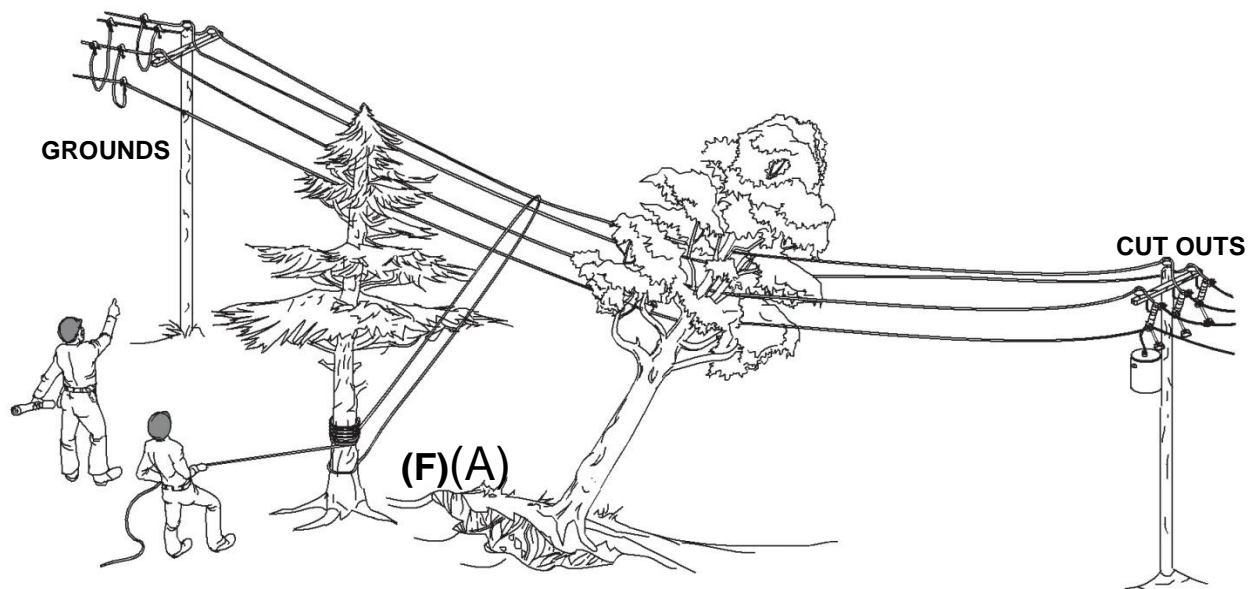


GROUNDS

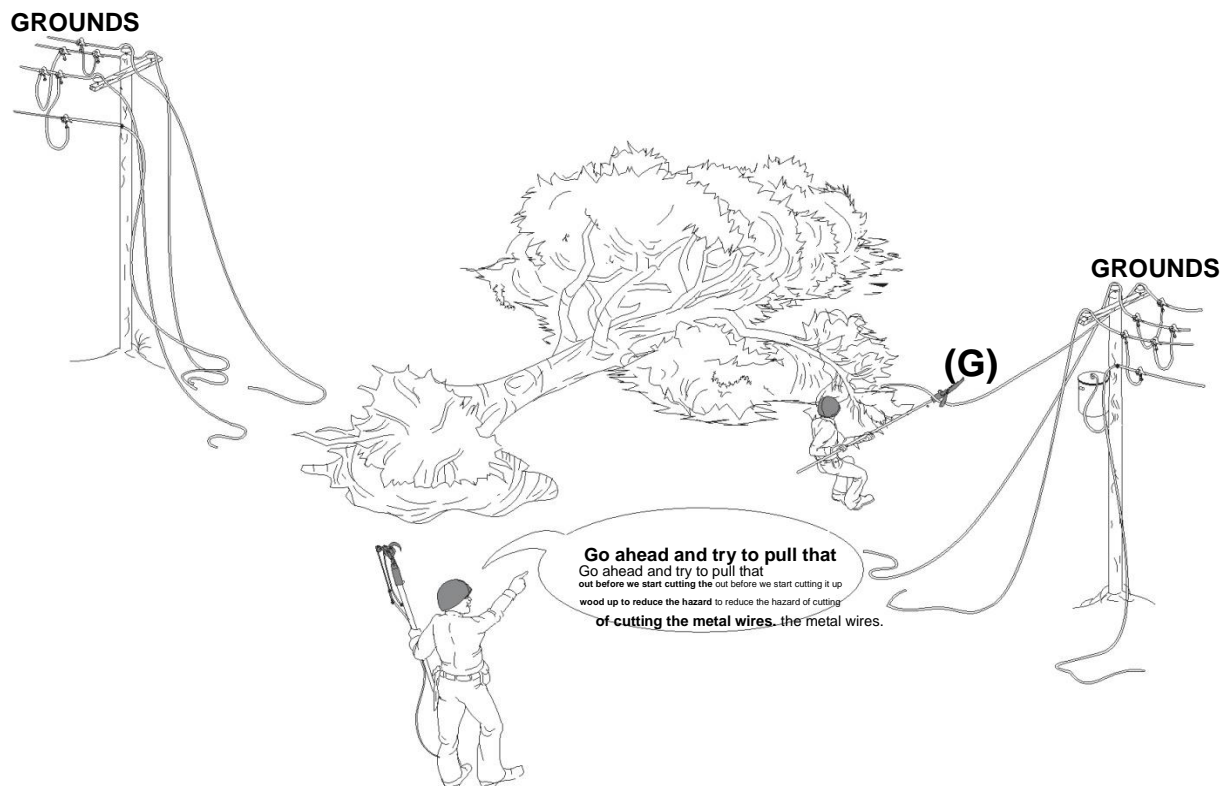


Note (E) – Grounds are not necessary when conductors are isolated and not being worked.

(Conductors have been made safe to work. De-energized (isolated), tested and grounded.)



Note (F) – When conductors have been made safe to work, a rigging rope(s) may be used to hold down electrical wires or tree parts to prevent inadvertent tension release when removing tree parts.



Note (G) – Non-conductive tools may be used to clear wires from tree parts being trimmed if the wires present a greater hazard if not removed.

The 5 Company Policies to live By

Any employee who violates any of the following Safety Rules will be terminated from their employment with The Company:

1. *Not wearing a seat belt in a company or leased vehicle while it is in motion.*
2. *Operating or allowing the operation of a company vehicle by an unqualified and/or unauthorized person.*
3. *Not being 100% tie-in when manually climbing a tree or aloft in a bucket.*
4. *Violating the danger zone during tree felling.*
5. *Violating minimum separation (minimum approach distance) of any energized conductor with any part of your body or conductive object.*

CLARIFICATION OF UNDERSTANDING:

1. Seat belts save lives! The Company expects all occupants in any company-owned or -leased vehicle to wear seatbelts whenever the vehicle is in motion. If the seat belt is a shoulder-type belt, the strap shall be worn in front of the shoulder – not under the arm of the wearer. Also, if a seat belt is broken or missing, the vehicle shall not be operated with anyone in the seat until the seat belt is repaired or replaced.
2. "Qualified" as applied to company drivers means:
 - a. The employee possesses valid state licensing credentials for the vehicles they will drive.
 - b. The employee has met all Company driving standards such as but not limited to: Completing the Vehicle Loss Prevention Program (VLPP), annual review of Motor Vehicle Record (MVR) or Department of Motor Vehicles (DMV) reports for violations and DOT CDL requirements.

"Authorization" as it applies to company driver means:

 - a. The employee has been given the authority by the Director of Operations to use their company vehicle during certain and specific times.
 - b. Permission by management shall be given only after all qualifying processes have been completed.
3. When working above ground level, in a tree, the climber shall be attached to the tree before the climber's feet leave the ground. When working from an aerial device, the operator shall always have the full body harness and lanyard or other approved fall protection attached to his or her person and to the proper attachment point on the lift before the aerial device leaves the stowed position.
4. When felling a tree, a thorough evaluation of the situation shall be made taking into consideration the reaction of the tree and the current weather conditions. The Danger Zone is defined as in the Foreperson Manual as 1.5 times the height of the tree for employees handling ropes; and 2 times the height of the tree for all others not involved in the work. The only person who shall be in the Danger Zone is the saw operator. The saw operator must have a clear unobstructed path at an angle of 45-degrees on either side to the rear of the planned direction of the fall.
5. A determination shall be made by all employees as to the maximum voltage (phase-to-phase) which they will be exposed to and then the employee shall refer to the Minimum Approach Distance Chart for the distance they need between them and the conductors

It is strict company policy to provide a safe and healthful place to work for all employees. It is your job to carry out this policy at the crew level. You, as foreperson are responsible for the safety of each crew member during working hours, and the safe completion of every job your crew is assigned.

To help you, follow the incident prevention material provided. Know what it says, know what it means, and train your crew accordingly. If you need help, see your General Foreperson.

It is strict company policy that each job is run according to this manual.

I. INCIDENT PREVENTION

A. There are four reasons for stressing incident prevention.

- 1. *We don't want to have people hurt*** - Therefore, do all you can to prevent incidents.
- 2. *We do want to keep our jobs!*** - To do this, you give the customers what they want. They want safe operations on their property! As one utility official put it, "We want safe operations. If you can't produce them, we'll get somebody who can!"
- 3. *We do want to continue and expand these jobs every year-*** This means keeping our price low enough to get the work. Incidents affect insurance cost which is one of our major expenses. You must keep a low incident rate to stay competitive!
- 4. *We do want to obey all laws*** - The Occupational Safety & Health Administration (OSHA) requires, as Federal Law, that every employer shall operate every job in compliance with published regulations and recognized safe operating procedures. Also, comply with company rules, regulations, laws, codes and customer requirements, as they apply.

B. There are four things needed for incident prevention.

- 1. *Tools and equipment*** - Even though we can't change the trees, we do use the appropriate tools and equipment available.
- 2. *Education and Training*** - Like all knowledge, yours is of little value until you do something with it. It is your first job as Foreperson to teach your crew members how to work safely as outlined in this manual. Only then can they do the job safely as it must be done.

3. Supervision - We're all human, and we all make mistakes. We get tired, we become irritable, we worry and we become frustrated. All these things, and many more like them, cause us to forget, to take short cuts, and to use bad judgment. Although training gives a person the know-how, it takes even more to produce an expert, incident-free operation. That "even more" is supervision. This means to watch - and guide - your crew carefully so that you can be sure they are working the way you taught them to; so that you can see the buildup for an incident. Be pro-active, do something about it before it happens. That is supervision. Just being there is not.

4. Incident investigation and reporting -We must learn from each other's mistakes wherever injuries occur. To do this, the why's and how's behind every incident shall be understood and shared.

C. INCIDENT PREVENTION IS ACCOMPLISHED SIMPLY BY RUNNING AN EXPERT CREW!

You've probably heard Forepersons say they have no time for incident prevention - they're too busy running the job! Nothing could be further from the truth! It is not a question of how much time there is, but rather what is done with the time available. They're either running a first class operation without incidents, or they're running a second rate operation and have the incidents to prove it!

As Foreperson, you know what a first class job is. Here are a few points to help you make yours that way:

1. Keep your tools and equipment in good condition -No one can work well with dull or broken tools. No one can take pride in the job when the equipment is run down and in constant disrepair. You are the Foreperson - insist that your tools and equipment are maintained the way they should be.

2. Educate and Train each person thoroughly - From Day One, do this so they can do any job in the crew as well as you can, using safe work methods.

3. Supervise your crew - A line clearance crew is not supposed to run itself. You are supposed to run it! You must always observe what your crew is doing and how it is doing it. Only then can you be sure that your operation is up to the standard required.

A crew shall never be left without supervision! If you must leave your crew for a valid reason, see that one of your qualified crew members who have been certified to Foreperson takes over the Foreperson's responsibilities while you are gone. If no one has been certified to Foreperson, work shall not proceed until other qualified supervision is available. Everyone shall be told who's in charge when you are away.

4. Use the material available to help you accomplish your job!

- a. **"DO'S & DON'TS" POSTER:** This poster is permanently displayed on your truck. The poster lists the points involved in most of the incidents which happen in our industry. Each point is illustrated with a drawing/picture.

This poster can be used in several ways:

- (1) As a reference for new crew members. The "Dos & Don'ts" are some of the first things a new person must learn.
- (2) As a reference for experienced crew members. All of us tend to forget and develop bad habits, and this will help you keep everyone on the right track.

- (3) As an outline for supervision. Just by continually checking your crew against the points made on the list of "Do's & Don'ts" you will see things you might otherwise miss and, therefore, run a safer crew!
- a. *Daily/ WEEKLY SAFETY MEETING:* Safety lessons are sent to you from the Canoga Park Safety and Risk Management Department for your use as the basis for a daily/ weekly tailgate safety meeting. Don't just read it to your crew. Know what it says, study the material it refers to, and discuss it with your crew. Be sure they know what it means and be sure they work accordingly.

All employees are to sign each lesson sheet to show they participated in the meeting, document understanding and keep for future reference.

5. Stay out of the line-of-fire

What is "line of fire"? This is defined as a task in which objects in motion or those with "stored energy" such as pressure, strain, or potential energy could cause the release of an object in such a fashion to violently strike personnel.

While performing any job task or activity, we have to consider where we are physically located relative to objects in motion throughout our work plan. Putting ourselves in the path of an object, (*a moving vehicle, standing beneath a suspended load, etc.*), can lead to severe consequences of being struck by objects in motion.

When performing your job briefing and throughout the day, thoroughly evaluate your surroundings and ask yourself: **"Am I, or will I be, in the line of fire?" If so – GET OUT!**

Make sure you are not in the path of something that can hit you or fall on you. Consider all possibilities and if a risk exists, make a new plan.

6. Report incidents properly and promptly

- a. To report incidents properly, refer to Sec. 11 in this manual. It gives full instructions, illustrations and the forms to be used in reporting any kind of incident or claim you may have.
 - b. Report all incidents promptly to your immediate supervisor.
- (1) If one of your employees is injured, the report must be in before medical bills or compensation can be paid.
 - (2) If you have caused property to be damaged, we want to see that the claimant is taken care of as quickly as possible in order to maintain our good public and customer relations.
 - (3) If a false claim is made against you, the sooner we have all the details the better we'll be able to defend ourselves.

D. OSHA

The Occupational Safety & Health Act of 1970 "Assures every working person a safe and healthful place in which to work," and places the responsibility for this directly on management. OSHA considers that you represent management, which makes you responsible as management.

OSHA requires certain posters and reports to be maintained and/or posted. They are:

1. **OSHA Poster.** This is supplied by the federal and /or state government and briefly explains the requirements of the Act. You will find it posted in each office or shop. In addition
2. **First Report of Injury.** This is the personal injury incident report used by the company.

FATAL AND SERIOUS INCIDENTS. OSHA requires that a fatal incident, or one requiring the hospitalization of three or more employees, be reported to them within 8 hours. This reporting will be done by the Safety and Risk Management Department. If you should have such an incident, it is essential that you contact your immediate supervisor of the incident as soon as possible. If you are unable to contact your immediate supervisor after such an incident, call the Safety Department at the Canoga Park Office without further delay.

3. Penalties. Penalties provided for violations of the law can be serious. For example, a willful serious violation which causes a fatal incident can result in a penalty of up to \$75,000 for each violation (there can be any number of violations in one citation) and up to six months in prison for each willful violation. In addition, if a serious violation is not corrected following a conviction, a penalty of up to \$7,000 per day for every day following the correction dates can be imposed.

A serious violation that is not willful can produce a penalty of up to \$7,000 for each violation.

4. OSHA Regulations. Our operation is affected by CAL OSHA regulations.

Because there are regulations that do not cover our work, we do not generally issue copies to the field. However, any job conducted according to our Manual will be in compliance with CAL OSHA Regulations. You will be kept advised of any new federal regulations issued.

5. OSHA General Duty Clause. This section of the Act requires among other things, that each employee will be provided a place of employment “free from recognized hazards that are causing, or likely to cause, death or serious injury”

Since our Manual identifies “recognized hazards” in the “Incident Prevention” Section, the General Duty Clause has the effect of requiring you and your crew’s compliance with our Manual.

6. IT IS YOUR SPECIFIC RESPONSIBILITY TO EDUCATE AND TRAIN YOUR CREW IN THE HAZARDS AND SAFE WORKING PROCEDURES AND INSTRUCT YOUR CREW MEMBERS THAT IT IS OUR STRICT COMPANY POLICY TO WORK ACCORDINGLY. COMPLIANCE SHALL BE REQUIRED OF ALL EMPLOYEES, AND NON-COMPLIANCE SHALL RESULT IN IMMEDIATE, IMPARTIAL AND APPROPRIATE DISCIPLINE AT WHATEVER LEVEL NON-COMPLIANCE MAY OCCUR.

E. MEANING OF WORDS “SHOULD” AND “SHALL”

1. Throughout the Incident Prevention Section of this manual you will note the use of the words “should” and “shall.” When “should” is used, it means that the procedure referred to is the recommended procedure. When “shall” is used it means that the procedure is mandatory; the procedure must be followed, with no choice left to the worker or you

II. UNDERSTANDING THE ELECTRIC HAZARD

As part of the safety rules and safe practices of line clearance tree work, the trainee and the experienced line clearance tree worker must have a clear understanding of three elements of electricity and how they go together to explain just what the electric hazard is and why it is so real in our work. Therefore, AT THE EARLIEST POSSIBLE TIME, THE NEW EMPLOYEE SHALL BE TAUGHT AND UNDERSTAND THAT:

A. There are three elements of electricity which are of primary importance. They are:

1. **Ampere.** This is the unit measure of the FLOW OF ELECTRICITY through a conductor. To illustrate with something which may be more familiar to employees, this can be compared to measuring the flow of water through a pipe as "gallons per hour, or minute, etc." The best way to understand how much flow of electricity an ampere has, is to know that a common 60 watt light bulb requires about 1/2 amp or ampere; a small air circulating fan requires about one amp, and a steam iron about 5 amps.

The important thing to know about the Ampere is that very little electric flow can kill. As little as 1/10 of an amp will produce ventricular fibrillation, a condition of the heart which can kill. Any electric circuit we work around carries more than enough amperes to be deadly.

2. **Volt.** This is the unit measure of ELECTRICAL PRESSURE. Just as water pressure is required to cause water to flow through a pipe, electrical pressure is required to cause electricity to flow through a conductor. The electric generator produces electric pressure, or voltage. The low voltage electric pressures (secondaries) are 110 volts, 220 volts or 115V-230V. The higher voltages (primaries) are generally, 1,200, 2,400 volts or more and are usually expressed as so many kV, "k" stands for kilo, or one thousand, and V stands for volts. Thus 2,400 volts becomes 2.4kV 13,200 volts becomes 13.2kV, 69,000 becomes 69kV, etc. To illustrate how much pressure one volt is, consider for example, that the household electric light and small appliances need 110 volts to push the electricity through them. An electric stove requires 220V.

The important thing to know about the volt is that with a solid contact, as little as 12 volts can overcome the resistance of human skin and can kill. All work for, or around electric utilities involves at least 110V.

3. **Ohm.** This is the unit measure of RESISTANCE to the flow of electricity. Material through which electricity easily flows is said to be a good conductor. For example, No. 10 copper wire, which is about 1/10th inch in diameter, has a resistance of only one ohm per 1,000 feet. Material through which electricity does not easily flow is a poor conductor offering a high resistance. Materials of very high resistance are used as insulators because virtually no electricity will pass through them. Porcelain is a good example of this.

The important thing for us to know about resistance is that (1) when resistance is low enough in any contact that might be made on the job, and a path to ground through the victim is available, the results may be fatal; (2) there is no way to know what the resistance will be in any given contact, but it easily can be low enough to allow the passage of enough current (amps) to cause death.

OBVIOUSLY, THEREFORE, ANY ELECTRIC CONTACT IS POTENTIALLY FATAL, AND MUST BE AVOIDED.

B. THERE ARE TWO KINDS OF ELECTRIC CONTACTS

1. **Direct**, in which some part of the body is brought in direct contact with a conductor. An example of the direct contact is one in which a worker bumps into a conductor.
2. **Indirect**, in which some part of the body is allowed to touch some conductive material which is in contact with a source of electric power, or some conductive material which is being held, is brought in contact with a source of electric power.

An example of the indirect contact is one in which a worker touches a branch which is hanging on a conductor, or attempts to remove a hanger with a conductive tool such as a hand saw or touches a conductor with a piece of conductive hardware.

C. COMPLETING THE CIRCUIT

In order for electricity to do work (or be harmful) it must flow; in order for it to flow, there must be a "path to ground." If a person gets between a source of electric power and some path to ground the circuit could be completed, and the electricity could flow through that person. **NO WORKER SHALL EVER GET IN A POSITION TO "COMPLETE A CIRCUIT."**

D. HOW A CIRCUIT CAN BE COMPLETED. There are innumerable ways, but every employee must have these basic possibilities identified.

1. Between a conductor and a neutral or ground wire.
2. Between a conductor and some other path to ground such as:
 - a. A tree or tree branch
 - b. Utility pole
 - c. Guy wire
 - d. Aerial Device in which the insulation has been reduced by installation of unapproved parts or if fiberglass components have not been maintained.
3. Between two conductors, or "phase to phase." While this is not, technically, the completion of a circuit, it is a dead short between two circuits, the results of which are equally devastating.

E. ELECTRIC HAZARD ON THE GROUND. The electric hazard is not limited to people working aloft. The laborer or any other person working on the ground may also be exposed. There are several ways this can happen. Some of them are, for example:

1. The energized truck ("Hot Truck") caused by an uninsulated aerial device, or an insulated aerial device in which the insulation strength has been reduced by the substitution of unapproved parts or lack of maintenance being brought in contact with a conductor.
2. A tree becoming energized during a felling operation-when it contacts a conductor.
3. A wet rope being handled on the ground when the upper portion contacts a conductor.
4. Fallen conductors brought down by vehicle crashes, storms, tree limbs or other incidents.
5. Conductive fences, guard rails, equipment energized by fallen conductors.

F. ELECTRIC HAZARDS, THE CLIMBER IN A TREE

1. A tree is conductive, and provides a good path to ground. If you're in a tree and touch an energized part of a circuit, or touch the circuit with something conductive such as a saw or tree branch, you will "complete the circuit" through yourself, through the tree to ground.
2. A tree is just as good a conductor in the winter as it is in the summer. You may hear some people say, "the sap is running in the summer, so the tree is more conductive then. But the sap isn't running in the winter, so the tree is not so conductive then."

THIS IS WRONG! There is just as much sap in the tree in the winter as there is in summer. So, there is just as much danger in the winter as there is in summer.

G. ELECTRIC HAZARDS, THE BUCKET OPERATOR WORKING FROM THE AERIAL DEVICE

1. The Aerial Device that we use is a non-conductive machine that is tested and rated for insulation properties by the manufacturer. In it, an operator could contact a conductor, and assuming there is no other path to ground, the circuit would not be completed - just as a bird standing on a conductor does not complete a circuit and, therefore, does not feel a shock. But while this is true, it is strict Company policy and Federal Law, that aerial devices shall not touch, either directly or indirectly through conductive tools or material, any conductor or neutral, or approach more closely than Company required separation distances. (SEE TABLE IN THIS SECTION).

H. HAZARD OF FALLEN CONDUCTORS.

Because of the possibility of a crew being faced with the problem of fallen conductors caused either by storm, traffic incident, pole failure or incident resulting from their own operation, each crew member should understand that:

1. All fallen conductors or conductors hanging from pole structures shall be considered energized with potentially fatal voltage.
2. Any conductive structures in the vicinity, such as wire fences, guard rails, etc. shall be considered as energized and treated as such.
3. Fallen conductors can flow electricity through the earth. This electricity flow can cause a hazard and potentially fatal situation called "Step Potential". Step potential is the circuit from one foot through your body and the opposite foot, arm or other body part. If you experience an electric shock "tingle" in a body part that touches the ground as you approach fallen conductors, STOP, place both feet together and hop or place both feet together and shuffle (inch by inch) back out the same way you entered.

IN THE EVENT EMPLOYEES ENCOUNTER DOWNED CONDUCTORS, THEY SHALL:

1. Barricade the area by any means available, including use of crew personnel as guards.
2. Notify the power company.
3. Notify your immediate supervisor.
4. Notify the local police.
5. Never touch or handle wires, except with non-conductive tools, and then only in a life threatening situation where it is necessary to save a life.

I. STRICT COMPANY POLICY TO AVOID CONTACT WITH ALL WIRES, CABLES, UTILITY HARDWARE CONDUCTORS, GUY WIRES, MESSENGERS, ETC.

1. Because every utility hardware conductor the line clearance specialist works around may be energized with potentially fatal voltages, it is strict company policy that no employee engaged in line clearance shall touch any of these parts of overhead systems, including telephone, and that the use of personal protective equipment shall in no way be allowed to replace this policy.
2. Company policy prohibits any line clearance tree trimmer from approaching closer to conductors than the Minimum Approach Distances.

IN ADDITION, IT IS COMPANY POLICY THAT CLIMBERS AND BUCKET OPERATORS ALIKE SHALL STAY SIX FEET OR MORE FROM ALL UTILITY HARDWARE CONDUCTORS WHENEVER IT IS PRACTICAL FOR THEM TO DO SO.

III. WORKING SAFELY AROUND THE ELECTRIC HAZARD

The electric hazard is present in line clearance tree work. It can be effectively worked around if the tree worker understands the electric hazard (see Section 11), and always works according to these rules.

- A. ALL WIRES, CONDUCTORS, ARE TO BE CONSIDERED AND TREATED AS ENERGIZED.** Any conductor attached to a pole can become energized at any time because of some unexpected and unknown event. For example, a work crew some distance away can cause an energized conductor to contact some other wire or cable. The same thing can result from a car or truck striking a pole several spans away, a street light circuit could become energized as a result of a test procedure and/or unforeseen ground fault between conductors.

In addition to these considerations, most conductors carried on a pole provide a perfect path to ground through which a worker could complete a circuit in the event of an incidental contact with an electrical source.

A safety rule of line clearance is, "UNDER NO CIRCUMSTANCES SHALL THE TREE WORKER TOUCH, STAND ON, WORK FROM, LEAN AGAINST OR OTHERWISE CONTACT A CONDUCTOR, OR ANY CONDUCTIVE THING THAT IS IN CONTACT WITH THESE PARTS." *This applies equally to the climber working in a tree, or from a non-conductive Aerial device.*

NEVER USE YOUR
HAND OR OTHER
CONDUCTIVE
MATERIAL TO
TOUCH

OR REMOVE A
BRANCH THAT IS
ON THE
CONDUCTORS. IF
YOU DO - AND
COMPLETE THE
CIRCUIT - YOU MAY
BE
ELECTROCUTED!

- B. Fallen wires shall never be touched. They maybe energized.**

- C. Before an employee climbs, enters, or works around any tree,** a pre-climb inspection shall be completed and determination shall be made of the maximum voltage (phase-to-phase) which an employee will be exposed, and there shall be a second line clearance tree trimmer within normal (that is, unassisted) voice communication under the following conditions: if a line clearance tree trimmer is to approach more closely than ten feet of any conductor or electrical apparatus energized at more than 750 volts or, if branches or limbs being removed are closer to lines energized at more than 750 volts than the distances in our minimum approach distance table, if roping is necessary to remove branches or limbs from such conductors or apparatus.

D. SHOULD ANY QUESTION EXIST AS TO WHETHER OR NOT ANY PARTICULAR ELECTRICAL HAZARD SITUATION CAN BE HANDLED SAFELY, THE POWER COMPANY (OR SYSTEM OWNER/OPERATOR) SHALL BE ASKED TO MAKE THE CONDUCTORS SAFE, AND NO WORK SHALL BE ATTEMPTED UNTIL CONDUCTORS ARE MADE SAFE. CONTACT YOUR GENERAL FOREPERSON IN THESE SITUATIONS.

E. Carefully explain to your crew that the covered conductors they will see in overhead circuits are not insulated.

The covering is merely weather proofing for the protection of the conductor itself.

F. Branches which might fall into or otherwise contact the conductors shall be first made safe by cutting them back in sufficiently small pieces to prevent damage to the conductors and to a point that will allow the final cut to be made safely, or a rope shall be used to ensure control.

G. Only approved non-conductive tools shall be used to remove hangers from a conductor. The use of a conductive tool, such as a hand saw, is specifically prohibited.

H. The tree trimmer or bucket operator shall work with all parts of their body six or more feet from conductors whenever it is practical to do so. This clearance can be maintained in most trees trimmed for line clearance, and is the tree trimmer's best assurance against making a direct contact with a conductor. UNDER NO CIRCUMSTANCES SHALL THE WORKER APPROACH MORE CLOSELY OR BRING CONDUCTIVE TOOLS CLOSER TO ANY CONDUCTOR THAN PERMITTED IN THE FOLLOWING TABLE.

Minimum Approach Distances from conductors for line clearance tree trimmers and line clearance tree trimmer trainees:

| MINIMUM APPROACH DISTANCES | | | | | | |
|--|--|--------|---|--------|--|--------|
| Nominal Voltage in Kilovolts (kV) Phase to Phase | 1910.269 elevation factor, Sea Level to 5,000 ft.* | | 1910.269 elevation factor, 5,001 ft. to 10,000 ft.* | | 1910.269 elevation factor, 10,001 ft. to 14,000 ft.* | |
| | FEET | METERS | FEET | METERS | FEET | METERS |
| 0.05 to 1.0 | avoid contact | | | | | |
| 1.1 to 15.0 | 2'04" | 0.71 | 2'08" | 0.81 | 2'10" | 0.86 |
| 15.1 to 36.0 | 2'09" | 0.84 | 3'02" | 0.97 | 3'05" | 1.04 |
| 36.1 to 46.0 | 3'00" | 0.92 | 3'05" | 1.04 | 3'09" | 1.14 |
| 46.1 to 72.5 | 3'09" | 1.14 | 4'03" | 1.30 | 4'07" | 1.40 |
| 72.6 to 121.0 | 4'06" | 1.37 | 5'02" | 1.58 | 5'07" | 1.70 |
| 138.0 to 145.0 | 5'02" | 1.58 | 5'11" | 1.80 | 6'05" | 1.96 |
| 161.0 to 169.0 | 6'00" | 1.83 | 6'10" | 2.08 | 7'05" | 2.26 |
| 230.0 to 242.0 | 7'11" | 2.41 | 9'00" | 2.75 | 9'09" | 2.97 |
| 345.0 to 362.0 | 13'02" | 4.02 | 15'00" | 4.58 | 16'03" | 4.96 |
| 500.0 to 550.0 | 19'00" | 5.80 | 21'09" | 6.63 | 23'06" | 7.17 |
| 765.0 to 800.0 | 27'04" | 8.34 | 31'03" | 9.53 | 33'10" | 10.32 |

*Exceeds Phase to Ground

IV. CAUSE & PREVENTION OF FATAL INCIDENTS IN LINE CLEARANCE TREE WORK.

To give special emphasis to preventing fatal incidents, the types which have produced most of the fatalities in line clearance are listed below, together with the basic cause and means of prevention. AN IMPORTANT RESPONSIBILITY OF THE LINE CLEARANCE FOREPERSON IS THE CAREFUL EDUCATION AND TRAINING OF ALL CREW MEMBERS IN COMPANY SAFETY RULES, REGULATIONS AND/OR OTHER REQUIREMENTS, FOLLOWED UP BY CLOSE SUPERVISION TO ENSURE, TO THE GREATEST POSSIBILITY, THAT ALL COMPLY.

TABLE 6

| TYPE OF INCIDENT | BASIC CAUSE | PREVENTION |
|---|--|--|
| A. ELECTRIC CONTACT 1. Direct Contact | Inattention (climbing into, bumping into, etc.) | <p>Before entering any tree, the worker shall locate all conductors, plan the climb and work to avoid them.</p> <p>The worker shall frequently check the location of all conductors relative to the work area to ensure compliance with minimum approach distances.</p> |
| | Working too close to conductors. (Sometime caused by misunderstanding, e.g. conductors insulated, low voltage not dangerous, insulated aerial device allows safety rules to be broken, etc.) | <p>The worker shall never get closer than 2 feet 4 inches from conductors energized from 1.1 kV to 15 kV (see Minimum Approach Distance Table for higher voltages) and remain at least 6 feet or more from all conductors when it is practical to do so. The use of rubber insulating material does not permit you to break minimum separation unless the conductor is made safe, e.g. de-energized and isolated (grounded on each side of the conductor being worked with all potential sources of back feed – service wires/laterals isolated) by the system operator/owner.</p> |
| | Slipping or falling into. | <p>The climbing rope shall be crotched so that a fall will not cause the climber to swing into the conductors.</p> |
| | Intentional contact. | <p>The tree worker shall <i>never</i> touch any conductor, including those that may have fallen to the ground.</p> |
| 2. Indirect contact through tools & equipment. | Inattention | <p>The worker shall frequently check the location of the conductors in relation to the tools being used.</p> |

Table 6

| TYPE OF INCIDENT | BASIC CAUSE | PREVENTION |
|--|--|--|
| 2. Indirect contact through tools & equipment.(Cont'd) | Misuse of tools and equipment, caused by lack of understanding. For example, thinking a hanger can be safely removed from a conductor with a hand saw or other conductive object -if it's done quickly enough. | Hangers shall be removed from conductors only with non-conductive tools such as an approved pruner pole, but never with a conductive tool such as a hand saw, or by handling it directly. |
| 3. Indirect contact through tree material. | Loss of control of branch being removed. Misjudgment. | Whenever there is any reasonable possibility that a branch may brush against a conductor during its removal, it shall first be cut back far enough to ensure its safe removal, or it shall be roped out. |
| | Inattention | The worker shall constantly check the location of conductors in relation to wood being removed or otherwise handled |
| | Misunderstanding (e.g., branches drier in winter because "sap is not running," contact not harmful if of short duration, etc.) | Branches that are contacting conductors or that are within the distances specified in our Minimum Approach Distance Table may be removed only through the use of non-conductive equipment (wood pruner pole, fiberglass/pruner pole, hydraulic pole chain saw, hydraulic circle saw, hydraulic pole pruner). |
| | Working too close to conductors. (Sometimes caused by misunderstanding, e.g. conductors insulated, low voltage not dangerous, insulated aerial device allows safety rules to be broken, etc.) | |
| | Inappropriate reaction | Each worker shall be specifically trained not to grab for a branch or other piece of wood that has "gotten away" or is otherwise falling toward a conductor. |
| 4. Other indirect contact | Misunderstanding (telephone wires or cables are safe because they're energized to only 6V; ground wires are safe because they're never energized; street light circuit not energized during daylight, etc.) | Never touch a conductor attached to a utility pole. An incident, out of view of the tree worker, may cause an energized conductor to contact other conductors on the pole and energize them, or the street light circuit may be energized for test, etc. |

Table 6

| TYPE OF INCIDENT | BASIC CAUSE | PREVENTION |
|--|--|---|
| 5. Direct or indirect contact by falling trees or tree parts | Loss of control in a tree felling operation. Collapse of tree or tree parts thereof. | <p>Every tree over 5" DBH felled shall be properly notched and back cut, and a rope shall be used to start its fall in the required direction. When there is any question that it could be blown onto or otherwise fall on or brush against a conductor, ropes shall be used to prevent this, or it shall be topped.</p> <p>All conductors, (e.g. neutrals, grounds, wires and cables) insulated or not, shall be considered energized with possibly fatal voltages, and not touched.</p> <p>No part of any aerial device shall be brought in contact with any wire, cable or conductor.</p> <p>All covered conductors shall be considered to be energized and not insulated.</p> <p>Before felling, climbing or otherwise working on any tree, it shall be carefully inspected for dry rot, decay, defects or damage, etc., that might cause its collapse.</p> |
| 6. General | | |
| B. FELLING TREES | Inattention | <p>During all tree felling operations, all persons not directly involved with the work shall be kept clear, to a distance equal to 2 times the height of the tree and 1.5 times the height of tree for rope handlers.</p> <p>All crew members shall be trained to remain alert to every phase of a tree felling operation from its beginning until the tree is on the ground and secure.</p> |

Table 6

| TYPE OF INCIDENT | BASIC CAUSE | PREVENTION |
|--|--|--|
| B. FELLING TREES <i>(Cont'd)</i> | Improper procedure (tree is "ripped" over with single cut. Multiple leader tree felled as single tree, etc.) | <p>Every tree felled (5" DBH or more) <u>shall</u> be properly notched and back cut, and <u>a rope shall</u> be used to start its fall in the required direction. When there is any question that it could be blown over or otherwise fall on the line, additional ropes shall be used to prevent this, or it shall be topped.</p> <p>Before beginning any felling operation, all factors such as condition of tree, balance of tree, wind condition, etc. shall be taken into consideration.</p> <p>The worker felling the tree shall be specifically required to make a careful visual check of the intended fall area and to provide an audible warning before starting the notch cut, before the backcut, and just before the felling cut is completed.</p> <p>Because of the possibility of leaders splitting or falling apart when a multiple leader tree is felled as a single tree, each leader shall be felled, or removed, individually.</p> |
| | C. FALLS Inattention Improper procedure. Failure to tie in. Improper crotch Lack of hold | <p>Before climbing, every tree shall be pre-climb inspected for weak crotches or branches caused by rot, splitting, dead branches, etc., and the climb planned accordingly.</p> <p>The climber shall be tied in or secured at all times, or immediately upon entering an Aerial Device. (Ref. Company Policy Manual)</p> <p>The climbing line shall be crotched around a main leader from which the branch grows, not around the branch itself.</p> <p>The climber shall maintain a three point hold while climbing and 100% tie in.</p> |

Table 6

| TYPE OF INCIDENT | BASIC CAUSE | PREVENTION |
|------------------------------|--|--|
| D. EQUIPMENT ROLLOVER | <p>Failure to use a safety strap, when needed</p> <p>Equipment failure</p> | <p>Climbers shall always carry a safety strap while working aloft and use when climbing line is not secured.</p> <p>Each climber shall under the supervision of the Foreperson inspect their rope and saddle each climb, and at any time damage to this equipment may be suspected. Rope suspected to be unsafe shall be immediately removed from service. Worn or damaged parts at the end of the rope shall be cut off. Particular attention shall be given to the tail of the rope where the Friction Knot (e.g. Tautline Hitch) is tied and wear occurs.</p> <p>The climbing rope shall be reversed on the snap weekly, end for end, to provide even wear.</p> <p>Saddles with worn out eyelets, belts, straps or other structural parts shall not be used.</p> <p>The Aerial Device shall be inspected regularly according to the instructions of the Equipment Department and manufacturer.</p> <p>Bulldozers, log skidders, etc, shall not be operated cross hill on steep grades. Soil conditions, the presence of stumps, roots, rocks, etc. could combine to make a rollover hazard.</p> <p>Equipment shall be operated in a controlled professional manner. Excessive speed, excessively fast and sharp turns, especially when operating down hill and any other form of reckless operation shall be prohibited.</p> <p>Seat belts shall be used.</p> |
| E. VEHICLE CRASH | <p>Unsafe Driving</p> | <p>All vehicles shall be operated according to applicable laws, safe driving practices and manufacturer recommendations.</p> <p>Always use safe driving practices and obey the law.</p> |

V. GENERAL OPERATING PROCEDURES

A. GENERAL

1. A hard hat and eye protection authorized by the Company shall be worn while working except while driving or riding in a vehicle and is not required during personal time such as lunch or breaks. Inspect all hard hats daily for cracks, or damage or wear in the suspension system. Replace any hat that is damaged or worn.
2. Jewelry, beards or excessively long hair shall be prohibited where they may present a hazard.
3. Clothing which is comfortable and appropriate for conditions and the work being performed shall be worn.
4. When working above ground level, or in any situation where falling is a hazard (such as on an extremely steep hillside or cliff) each climber shall be properly tied in with a rope and saddle authorized by the Company. In the case of the bucket operator, the body harness and *lanyard* provided by the Company shall be used.
5. In no case shall homemade safety equipment or safety equipment *not authorized* for use by the Company, be used.
6. Climbing ropes and bucket lanyards shall not be used to handle branches, wood, or equipment of any description or weight, such as a chain saw or chunks of wood.
7. Every job site, and all trucks, trailers and other equipment shall be maintained in a neat and orderly manner.
8. Public walkways and thoroughfares shall at all times be kept clear of debris, tools and equipment. Adequate barricades and warning devices shall be used at all times.
9. Uncompleted jobs left after working hours.
 - a. All brush and debris which present a hazard shall be cleaned up before leaving the job. If this is not possible, adequate barricades and warning devices shall be used. Contact your General Foreperson.
 - b. Ropes should not be left in trees overnight.

If ropes must be left in a tree at any time the crew leaves the job, they shall be tied off sufficiently high in the tree to prevent access for people on the ground.
 - c. All cuts shall be completed once they have been started. Leaving a cut uncompleted is prohibited.
10. Whenever gates are opened for any reason, they shall be closed and latched by whatever means provided to prevent children or animals from wandering away.
11. To the greatest extent possible, avoid contact with poison ivy, oak, sumac or any other poisonous plant.
12. When working on a roadway, where vehicles routinely travel, or on a designated shoulder of a road, all workers shall comply with Federal and State laws requiring that they wear an approved highly visible garment. If working in these same areas from dusk to dawn, a worker shall also wear a highly visible safety vest with approved retro-reflectorized material.

13. Where legally permissible and when feasible, enter and exit vehicles from the non-traffic side.

14. Heat Stress Policy. Refer to Section 18.

15. Vehicle Backing-Up Policy

It is mandatory that a spotter shall be used whenever a vehicle is being backed-up, regardless of a chipper or trailer being attached. This requirement is for multi-person crews in which the second employee shall always assist the driver in backing-up the vehicle.

Additionally, when the crew is a single person, extra caution shall be used to ensure the backing operation is safe – scan all sides and if needed, safely exit the vehicle to better scan the parking location, and then slowly back into it. After parking the vehicle, a cone should be placed at the rear of the vehicle and a 360° walk-around shall be conducted before backing out of the parking space.

- Before backing a vehicle, make **sure** the way is clear! This will require a visual inspection and may require a physical walk-around by the driver.
- The driver and spotter shall have agreed upon communication signals, verbal and hand. In addition, they will have mutual understanding regarding the vehicle's route. **Never** back without help unless working alone!
- The spotter must be aware of the surroundings and note possible tripping or other hazards prior to backing.
- The spotter should maintain as much distance as possible from the rear of the backing vehicle; providing enough distance to escape in case of a trip or fall.
- **Under no circumstances shall** the driver allow the vehicle to move unless he/she is in visual contact of the spotter in the rear-view mirrors.
- In the event, the driver loses sight of the spotter – **STOP THE VEHICLE IMMEDIATELY**. Do not move the vehicle until the driver has regained sight of the spotter.
- If the spotter is required to reposition, the driver must stop the vehicle until the spotter is visible in a rear-view mirror and the driver is aware of the change in spotter's position. There will be no back and forth movement by spotter while the vehicle is in motion.

Whenever possible, select a parking location where backing is NOT necessary. This can be accomplished by “pulling thru” a parking space. If alone and backing is necessary, choose to back into your parking space upon ENTERING the location - so you can “pull out” when leaving.

B. BEGINNING THE JOB

1. Before any work is started a job briefing shall be completed.
See job briefing policy and training tool on next page.

COMPANY JOB BRIEFING POLICY

1.0 BEFORE ANY WORK IS STARTED

- 1.1 Perform a detailed hazard assessment. The Crew Foreperson (or employee in charge) is responsible for surveying the work location in order to identify any and all hazards that could injure an employee.
- 1.1.1. Perform the required Job Briefing. The Crew Foreperson must conduct a job briefing with all employees involved before they start each job. The briefing shall cover at least the following items (steps):
- 1.1.1.1. Hazards associated with the job (e.g. manual work, bucket work, work zone set-up, dogs in a yard, wind, vines, over hangs, tree conditions, ground conditions, etc.).

- 1.1.1.2. Energy source controls (e.g. know the voltage and min. approach distance, outage procedures, storm work procedures, etc.).
- 1.1.1.3. Work procedures involved (Describe in detail - equipment and tools to be used, work sequence and specific procedures, who will do what, who is in charge, and verify that everyone understands what role they are going to play.)
- 1.1.1.4. Special precautions (e.g. emergency medical service, storm work procedures, vines, roping, use of local authorities for customer issues, etc.).
- 1.1.1.5. Personal protective equipment requirements. (e.g. safety glasses, hard hats, etc.).

1.2 Document the Job Briefing. This shall be performed on paper, with a pen or pencil and on a form that contains at least those items contained on the Company Job Briefing Form. The Crew Foreperson shall sign and each employee on the crew shall initial. Completed forms shall be maintained in the possession of the crew or in any other designated location for a minimum of 30 days.

2.0 NUMBER OF BRIEFINGS. The specific number of job briefings cannot randomly be assigned without full knowledge of each job. However, the following guidelines shall apply:

- 2.1 NORMAL WORK: There shall be at least two (2) written job briefings each day in which work tasks are the same throughout the day. These shall occur once before beginning any work at the start of the day or shift AND after mid-day lunch or break. *Note: The 2nd job briefing may not use the same written form as earlier in the day.*
- 2.2 Significant Work Task Change: An additional job briefing shall be conducted if significant changes, which might affect the safety of the employees, occur during the course of the work. *Note: The 2nd job briefing may not use the same written form as earlier in the day.*
- 2.3 Storm or Emergency Work: A new written job briefing shall be conducted for each new job site before work tasks begin.

3.0 EXTENT OF BRIEFINGS.

Each job briefing shall review the minimum 5 items (steps) as outlined above in 1.1.1.

4.0 WORKING ALONE. An employee working alone and performing a work task shall complete a documented job briefing to ensure that all aspects of safety have been identified and addressed.

- 4.1 The truck and/or chipper shall be parked completely off the highway whenever possible and always as far off the roadway as possible. Don't create a traffic hazard.
- 4.2 Warning signs provided by the Company shall be put out at each end of the job. Many states have their own laws on how far from the job site these shall or should be placed, but a good rule of thumb is to place the signs 100 feet per each 10 miles per hour of roadway speed limit at each side of the job site. Each General Foreperson is responsible to know the work site signing requirements for the geographic area where the work is being performed.

Always use cones.
- 4.3 When the job operation presents a hazard to PEDESTRIAN TRAFFIC, effective barriers and/or flaggers shall be used.
- 4.4 Special effort shall be made to keep children and onlookers clear of the work area. If necessary, work shall be suspended until the area is cleared.
- 4.5 Temporary Traffic Control - Refer to the company pocket reference guide and poster. At least one or the other are required to be on all company vehicles performing temporary traffic control.

HOW TO CONDUCT A JOB BRIEFING

(On the Job - Training Tool)

1. **HAZARD IDENTIFICATION:** This means all known hazards need to be identified and known by **all** crew members.

All crew members are encouraged to identify hazards and talk about them to raise awareness. Identify hazards aloud to raise the level of ***awareness*** in each crewmember.

NOTE: Hazards can change from jobsite to jobsite or even as a job is worked and may require an update to the current job briefing or a whole new job briefing.

2. **KNOW THE ENERGY SOURCE CONTROLS:** This means you need to know what you will do to prevent electrical contact. Everyone must know the voltage of the utility lines being worked, the minimum approach distance, and if needed, the proper deenergizing and grounding procedures.

Review the type of line construction, condition of the facilities, and the location of the conductors. If working on a foreign utility (e.g. storm work) the voltages and construction may be different from your home utility. Note: Be aware of generators and possible back feed.

Energy source control also means knowing the hidden potential of stored energy such as hydraulic hoses, rotating equipment, or elevated tools and equipment.

3. **WORK PROCEDURES:** This means you need to discuss with **ALL CREW MEMBERS**, as outlined by the Foreperson in charge, how the job will be done. The Foreperson must be very specific with instructions.

This may require pointing out specific tasks and rehearsing what needs to be done. Each Crewmember must know and understand what they will be doing and expected to perform.

4. **SPECIAL PRECAUTIONS:** This means you must address each and every hazard with a way to prevent an incident.

Other Examples:

- Place a cone near a hole, placing extra signs, moving debris from a walkway.
- Using a rope to secure something that is broken.
- Requesting a scheduled or emergency outage.
- Requesting more help for the job.
- Maintaining minimum working distance, rigging and roping, etc.
- Use Caution Ribbon to bring attention and raise awareness

In most cases, taking the necessary precautions takes very little time and provides a great deal of safety.

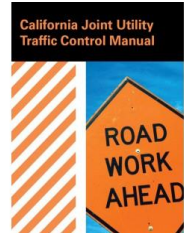
Special emphasis must be placed on job location addresses in case of an emergency situation on your crew and emergency assistance is called upon. Designate a primary and alternate to place the emergency assistance call if needed.

5. **Personal Protective Equipment (PPE):** This means you must know what PPE is required for the job and use it. This may include hardhats, safety glasses, and work boots. Other things to consider are traffic safety vests, hearing protection, gloves, etc.

COMPANY POLICY FOR WORK ZONE SAFETY / ROADSIDE SET UP

1.0 Policy Statement

- 1.1 Proper work zone safety is critical to the prevention of injuries for those employees who must work on or near streets and highways. This policy provides uniform and minimal rules and guidelines for work zone / roadside set up safety of employees and the general public.
- 1.2 Guidelines for specific work zone protection shall be followed as described in the California Joint Utility Traffic Control Manual. This manual is located in your company vehicle.
- 1.3 Local or State rules may exceed the requirements of this policy, but cannot be less than the requirements of this policy.
- 1.4 Equipment (such as cones and signs) shall at a minimum conform to the applicable provisions as outlined in the California Joint Utility Traffic Control Manual



2.0 Purpose

- 2.1 To provide a consistent approach to work zone protection through proactive training and company-specific guidelines.

3.0 Application

- 3.1 Any time the normal function of a roadway is disrupted, temporary traffic control procedures must provide for the safety of workers, road users, and pedestrians. At the same time, it must provide for the efficient completion of the work activity. Refer to the California Joint Utility Traffic Control Manual
- 3.2 Work zone safety protection training is required for all Company personnel who are assigned the responsibility to design, set up, and manage a work zone.
- 3.3 Flagger safety training is required for all Company personnel who are assigned the responsibility as a flagger that controls vehicles in or around a work zone.
- 3.4 As a general rule, there are no exceptions to the adherence of this policy. However because of short duration work tasks (such as street light operations and bulb replacements) full compliance may not apply. Other work tasks which may require a variance MUST be approved in writing Safety and Risk Management Department.
- 3.5 Where discrepancies exist between corporate standards and state or local regulations, the General Foreman shall contact their Safety and Risk Management Department for clarification.

4.0 Definitions

- 4.1 **Work Zone:** A work zone is an area of a traffic way in which construction, tree-work, or utility work activities are conducted. It begins at the first informational sign and ends at the last informational sign. All work is contained within the work zone.
- 4.2 . **TTC:** Temporary Traffic Control.

C. PROPER PERMISSION shall be secured for all work.

1. Only the property owner can give you legal permission, a tenant, or child cannot.
2. Routine trimming requires verbal permission only, unless otherwise specified by our utility customer.
3. **Written permission from the property owner or owners shall be secured before any tree is heavily topped or removed.** A standard form is provided for this purpose.
4. If someone else (your General Foreperson or the Utility Company) gets permission for you, a courtesy call shall be made to the property owner immediately before work is actually started.
5. When permission for line clearance trimming is refused, or the work cannot be accomplished for any other reason, our utility customer shall be notified in writing. Contact your General Foreperson to complete this requirement.

D. CLIMBING1. ***Before-the first climb of the day-***

- a. A Job Briefing shall be conducted.
- b. All climbers shall be equipped with an approved saddle, rope, and safety strap. If to be used, tree gaffs shall be inspected for damage and to ensure proper gaff tip shape and sharpening.
- c. Climbing equipment shall be inspected: rope, saddle, snaps D-rings, belt eyelets and thimbles, etc. Weak or questionable equipment shall be removed and tagged out of service.

2. Before every climb-

- a. The climber shall perform a pre-climb inspection and be familiar with the characteristics of the tree to be climbed.
- b. The climber shall be fully aware of the position of all conductors in relation to the tree and the work position.
- c. The crotch to be used should be selected from the ground before the climber is in the tree. Never crotch-in over conductors or where the climber will be closer than 6 feet to the conductors on ascent or decent.

3. The Climb - The climber shall be 100% tied in when climbing into and working the tree, and be guided by the following:

- a. Climbing activity shall be performed in compliance with Company climbing policy requirements.
- b. Dead limbs shall be avoided wherever possible. If they must be used to support weight, be sure they're capable of doing so beforehand.
- c. A three point hold should always be maintained as a means of preventing a fall. Every climber shall comply with their Company's policy.
- d. Weight shall always be placed on a branch as close to the leader from which it grows as possible. The farther out the weight is placed, the easier it is to break the branch.
- e. The climber shall continually check their position in relation to the conductors.
- f. The pole saw and pole pruner shall be hung securely, so that wind or the movements of climbing will not cause them to fall.
- g. Climbers shall not climb or work from utility poles except to remove vines that have grown on the utility pole.
- h. Climbers shall not stand on, lay ladders against, or otherwise touch any conductor.
- i. Climbers shall not stand on, walk on, or work from, roofs of garages, porches, houses, etc.
- j. Working from the top of the truck (including the cab guard screen on an aerial device) is expressly prohibited. This does not apply to carrying out equipment inspection and maintenance procedures.
- k. Tools shall be lowered with a handline from the tree when work is completed, not thrown or dropped out.

4. Tie In/Crotching Methods/Flexible Branches

- a. The tree being climbed shall have enough limbs or strong enough limbs to safely support the climber's weight.
- b. Double crotching may be needed for supporting the climber's weight on flexible branches.
- c. The tree being climbed must provide an adequate crotch for a climbing line.
- d. The tree should be climbed from the side away from the energized conductors.
- e. Use of the safety strap may be required to maintain 100% tie in.

5. **Use of the climber's line.** The climber's line shall be used according to the following:

- a. Before any trimming is started, whether the work is 80 feet in the air or can be accomplished from a ladder, the climber shall be properly tied in!
- b. The crotch selected for tying in shall be as nearly over the work area as practical, but never directly over the conductors, or close enough so that the path of descent would violate the minimum separation required.
- c. The rope shall be crotched around a leader, not a branch growing from it. In this way, the branch is less likely to break, but if it should, the rope will merely slip down the leader to the next branch. Double crotching may be necessary in special situations to support the climber's weight.
- d. Crotch to a leader other than the one being worked in whenever practical.
- e. As far as possible, an open crotch shall be used in preference to the tight crotch, since the open one is less likely to split.
- f. The end of a climber's line shall be kept clear of all traffic, so that it cannot be caught on a passing vehicle.
- g. *The knots most important to the tree climber are the Tautline Hitch, Bowline, and Figure 8. Be sure they are properly tied.*
- h. Close attention shall be paid to the length of the climber's line and the height of the crotch! The climbing line should be more than twice as long as the crotch you are tying into is high.
- i. In wet, freezing weather, special care shall be used to keep ropes free of snow and ice. A taut line hitch may not hold on a wet or icy rope.
- j. The climber's line shall be used to help distribute the weight of the climber. Used this way, the climber will tire less quickly and be able to move around safely on branches which would not otherwise support that much weight. The climber shall work without slack in the climbing line to avoid injury caused by a sharp jerk, should a fall occur.
- k. A climber shall never be pulled into a tree by hooking a truck, car or other machine to the climbing line.

6. **Principal Hazards**

- a. Falling.
- b. Electric shock.
- c. Pendulum Swing
- d. Laceration with severe bleeding.

E. PRUNING

1. Before causing a branch or wood to fall, the climber shall give an audible warning and make sure it's clear.
2. ***If branches are being dropped on the roadway, a flag person shall be used when necessary to control traffic.*** When a flag person stops traffic, the climber shall be sure the traffic has actually stopped before causing wood to fall.
3. ***Branches and brush shall be kept off the conductors.***
4. ***A branch shall always be cutback to a size that can be safely handled.*** A rope shall be used to support and guide the branch, if there is any question about the ability of the climber or bucket operator to keep control. "The branch that got away" is almost certain to bring down a wire, cause an injury, or property damage.
5. ***If a branch should fall onto the conductors, it shall not be touched.*** To do so could complete the circuit to ground and could result in an electrocution! A clean and dry Non-Conductive tool shall be used to remove it.

For the same reason, a branch which is being held by the climber shall not be allowed to touch the conductors.
6. Branches being roped out of a tree shall be rigged so that no violent or unexpected motion will result which might cause injury or damage to property.
7. Every effort shall be made to protect the public and property from injury or damage as the result of any phase of your operations.
8. Principal Hazards
 - a. Falling.
 - b. Electric contact.
 - c. Swinging into tree.
 - d. Laceration with severe bleeding (sharp tools).
 - e. Struck by falling (or roped) limbs.

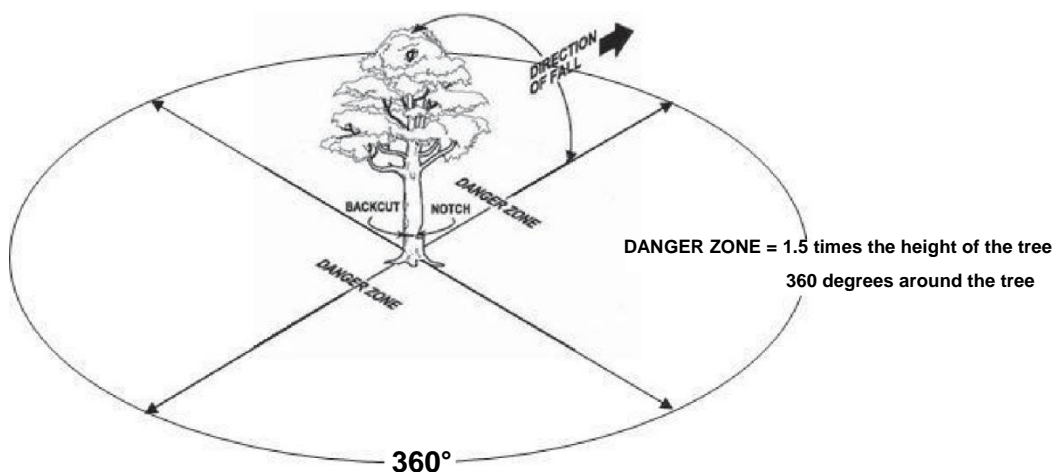
F. TREE FELLING

If you have been trained by a Corporate Safety Training Supervisor or designated Company tree felling trainer you are required to use the following 5-step felling plan. If not, continue to use the 6 steps of tree felling.

5 Steps of Tree Felling

- STEP 1 - HAZARDS AND HEIGHT**
- STEP 2 - TREE LEAN**
- STEP 3 - ESCAPE ROUTE**
- STEP 4 - THE NOTCH CUT (Part 1 of the Hinge)**
- STEP 5 - THE BACK CUT (Part 2 of the Hinge)**

Regardless of what method you use to fell a tree you must manage the Danger Zone.



- ☐ Danger Zone = 1.5 Times the Height of the Tree.
- ☐ Rope Pulling Zone = Rope must be more than 1.5 Times the Height of the Tree.
- ☐ Observer/Watch Zone = 2 Times the Height of the Tree.

STEP 1 - HAZARDS AND HEIGHT

Measures tree height w/stick measuring method
Checks the trunk, leaders, and branches for decay.
Protection of public.
Establishing of the Danger Zone(s).
Sets rope and explains rope pulling techniques.

STEP 2 - TREE LEAN

Demonstrates and explains potential consequences of lean, identifies any forward, back & side lean potential.
Show where to finish backcut on the "Good" side.

After Steps 1, Hazards and Heights, and Step 2, Tree Lean is completed and before any notch cuts are started by the Saw Operator, the Saw Operator must establish a clear, unobstructed escape route. The escape route should be at an angle of 45 degrees to the rear of the planned direction of the fall (see illustration below). The Saw Operator shall continue to move directly away from the tree in the escape route until the tree has come to rest. Then the Saw Operator and others may return to the felling area after checking for hangers.

Let's review step 3 of the new 5-step tree felling plan.



STEP 3 – ESCAPE ROUTE

Prepares escape route ideally at 45° exiting from tree.

Practice escape route, does a “dry run”.

Uses escape route when tree begins to fall. No hesitation.

During tree felling operations, the Saw Operator must:

- ☐ **Practice/dry run the escape route.**
- ☐ **Make absolutely certain that no one is in the Danger Zone** and give an audible warning to Crewmembers before starting any cuts.
- ☐ **Leave the stump area immediately** when the tree starts to fall, moving quickly away from the direction of fall along the line designated as the **Escape Route**. The Saw Operator shall continue to move directly away from the tree in the escape route until the tree has come to rest. It is imperative that the Saw Operator **move a safe distance from the tree**. Remaining by or too close to the tree has resulted in many serious injuries.
- ☐ **If the saw gets pinched in the back cut**, leave it behind.

STEP 4 - THE NOTCH CUT (Part 1 of the Hinge)

Uses felling sites to locate proper notch direction.

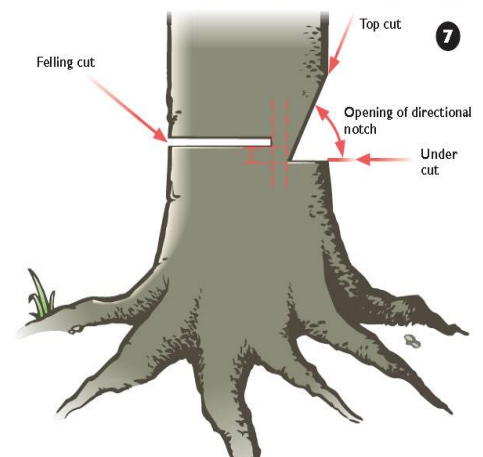
Cuts Open Face Notch. Begins with the top angled cut first.

Looks down into the top cut while making the bottom cut.

No by-pass cuts allowed ever. (No more than 1 chain thickness)

Feller issues audible warning of “STARTING NOTCH CUT”

Notch cut shall be no more than 1/3 deep with a width approximately 80% of tree diameter.



STEP 5 - THE BACK CUT (Part 2 of the Hinge)

Feller asks crew members if "DANGER ZONE CLEAR?" (Crew responds "CLEAR")

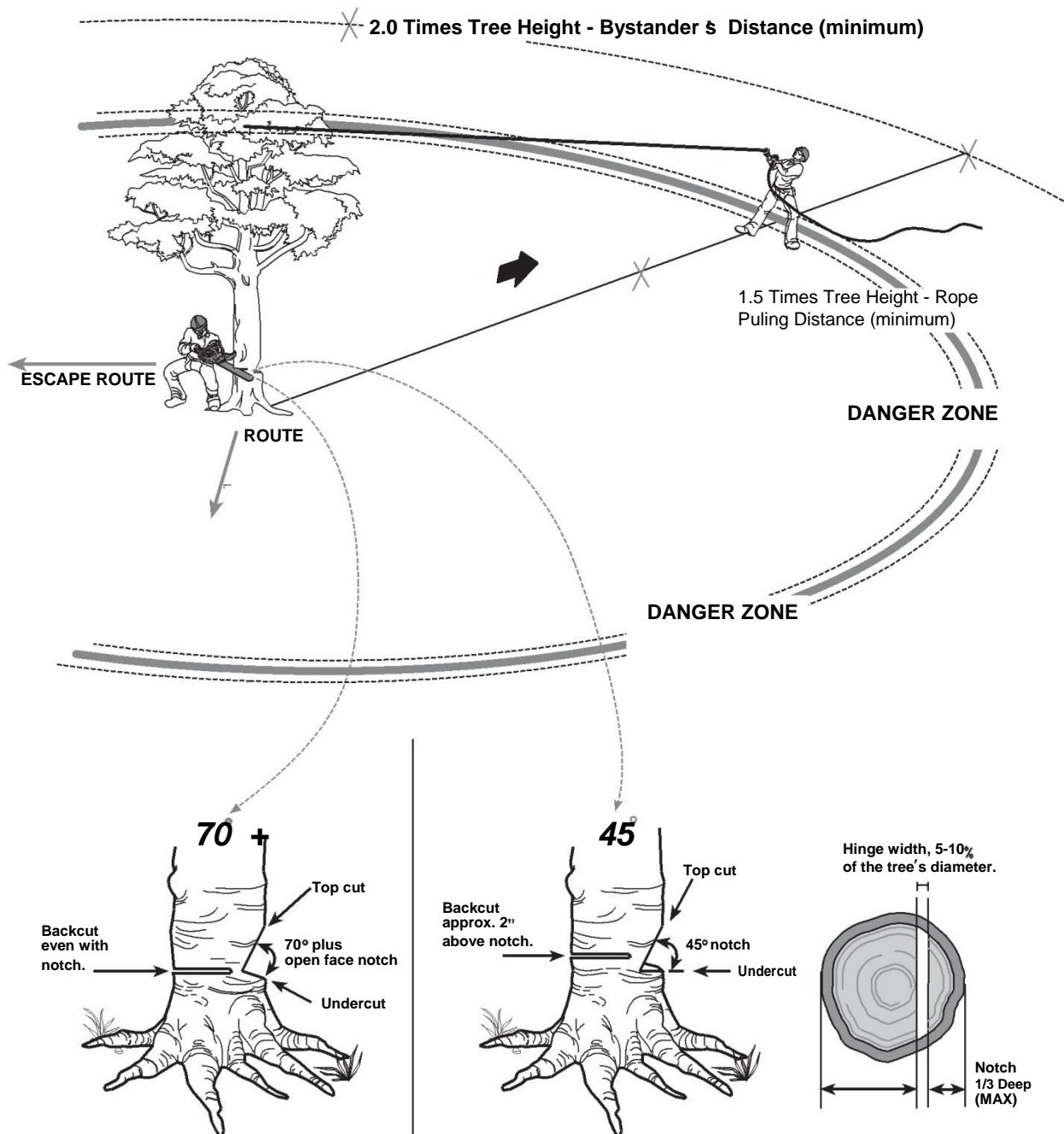
Feller issues audible warning of beginning back cut. ("MAKING BACK CUT") Feller completes back cut.

Feller utilizes escape route.

Feller alerts rope handler if necessary, to pull tree over.

Hinge wood thickness as planned is 5-10% of tree diameter. Hinge wood is uniform in width.

Check felling site for hangers.

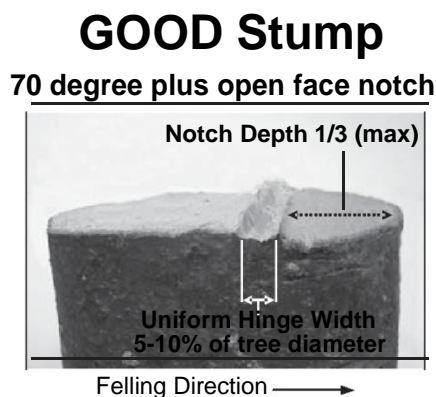
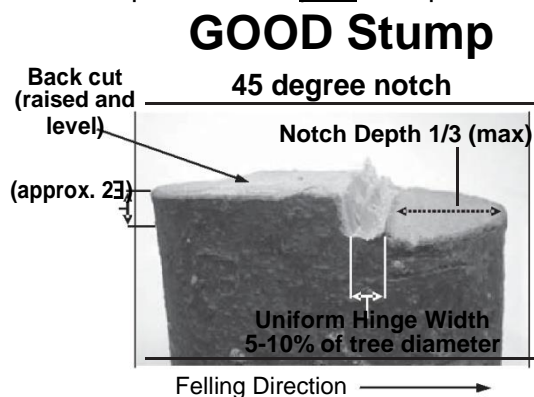


Key Areas of Concern

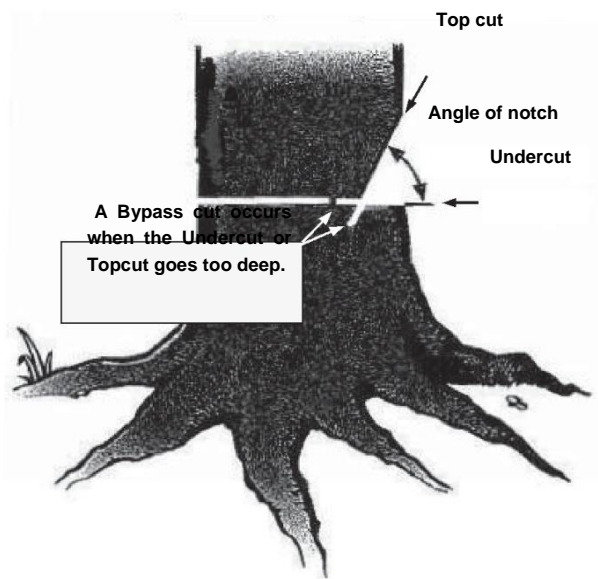
- Danger Zone Management – Saw operator must make sure no one is in the danger zone.
- Notching, Hinge Wood & Back Cut – All cuts must be precise and done to a predetermined cutting plan.
- Escape Route – It should be practiced before it is used to ensure it will be clear.

Common Take a look at the poster, poster letter, and the pictures below of stumps.

- ☐ How does your work look?
- ☐ Is it precise?
- ☐ Which picture does your stump look like?

**Mistakes**

Bypass cut created while making notch.



Other common mistakes involving the Notch, Hinge and Back cut.

Back cut is uneven and too high

Hinge is too large

Notch is too deep

G. LIMBING A FALLEN TREE

- 1. *When practical, stand on the side opposite from the limb being cut, and on the uphill side of the work.***
- 2. *Have secure footing.***
- 3. *Watch for tension (spring) in limbs being cut.***
- 4. *Don't cut limbs that are propping logs,*** unless the probable shift of the log can be controlled.
- 5. *Principal Hazards***
 - a. Cut by saw.
 - b. Hit by springing branches.
 - c. Hit by rolling log (tree).

H. BUCKING

1. Have solid footing free of tripping hazards.
- 2. *Always anticipate the probable movement of the wood being cut.***
- 3. *Work on uphill side,*** whenever practical, or secure log when not uphill.
- 4. *If necessary block the tree to prevent roll.***
- 5. *To prevent the saw from binding, slope the cut so it will open the cut, block it up, or use a soft or wood wedge to hold the cut open.***
- 6. *Use a cant hook to roll large logs.***
- 7. *Principal Hazards***
 - a. Cut by saw.
 - b. Hit by rolling log (tree).

1. **Inspect the object to decide just how it should be grasped** and how to avoid sharp edges, splinters, splinters, or other things that might cause injury.
2. A preliminary “lift” shall be made to be sure the load can be handled.
3. **Feet shall be solidly placed.** Usually, a more effective effort can be applied if one foot is placed slightly ahead of the other.
4. **Get as close to the load as possible, with the legs bent at the knees, at an angle of about 90 degrees.** Standing up from this position requires about half the effort required to stand from a full squat.

Keep the back as straight as possible. It may be far from vertical, but should not be arched. In the proper position, the leg muscles are in tension, ready to do the work, while the back muscles are “locked,” or tensed, so that the back is held rigid.

8. **A firm grip shall be had on the load**, with one end lifted first, if necessary, in order to get a hand under it.
9. **To lift, the legs shall be straightened at the same time the back is moved to the vertical.**
10. **To lift an object above shoulder height, one end shall be placed on the high point and the hands shifted to allow the load to be pushed up and over.**
11. **To change direction, the entire body, including the feet, shall be turned.** A twisting motion may result in an injury. This procedure shall be followed even when carrying very small objects.
12. **Lowering is basically the reverse of lifting.**
13. **Don't underestimate the need for careful instruction and supervision of these matters.** In a year's time, at-risk lifting behavior accounts for a high percentage of injuries.
14. **Principal Hazards**
 - a. Sprains, strains, especially involving back.
 - b. Struck by failing object being handled.

J. BURNING BRUSH

1. **Be sure you are complying with all local and state ordinances before burning.** Check with the local fire department or state agency.
2. **Gasoline shall never be used to start a fire.** Use kerosene or diesel fuel, if permitted by Local and State law.
3. **Fires shall never be left unattended.**
4. **More than one person shall be used to handle any large fire.** If a worker's clothing should ignite, or if he or she should fall into the fire, immediate help would be needed.
5. **Pay particular attention to actual and forecast wind and moisture conditions when burning.**

When ash from a wood or brush fire becomes damp or wet, it produces an acid harmful to many materials. DO NOT BURN LARGE FIRES WHEN SMOKE OR ASH CAN CARRY TO SURFACES WHICH CAN BE DAMAGED BY THEM! IF IN DOUBT, CONSULT YOUR GENERAL FOREPERSON.

6. **Consider the wind and the position of the fire relative to all overhead conductors.** The heat from a large fire can melt them!
7. **Take any and all precautions necessary to contain and control the fire as well as to protect property.**
8. **Workers with clothing contaminated with oil or any other flammable material shall be kept clear of open flames (a minimum of twenty-five (25) feet is required).** Even though their clothing may be thought difficult to ignite, the flash point of oil (115°) can very easily be reached on clothing placed near an open flame.

9. Principal Hazards

- a. Burns (falling into fire).
- b. Explosion caused by using gasoline to start fire.
- c. Property damage caused by-
 - (1) Fire getting out of control.
 - (2) Ashes (smoke) falling on painted or other damageable surfaces during wet or damp weather.
- d. Melting conductors overhead.

K. WATER SAFETY

- 2. Identify water hazards, which could or are likely to cause a drowning incident.
- 3. Fully instruct each crew member in the methods or techniques to be used for avoiding or eliminating water hazards. Approved PPE must be worn when working within 25 feet of designated body of water.
- 4. Know how close to the water's edge the crew members have to approach to perform the assigned work.
- 5. Know how deep the water is.
- 6. Establish a restricted, no entry zone between the work site and the water hazard to prevent crew members from entering this area when work is being performed in close proximity to water.
- 7. Have an established rescue procedure as well as P.P.E. (jonboat or skiff, length of rope, life preserver, personal floatation device, etc.,).
- 8. Require exposed employees to be tied off to an approved tie off device (saddles, full body harness, bucket belts attached by a rope or lanyard) to prevent falls into water.
- 9. Establish each crew member's ability to swim.
- 10. Principal hazards
 - a. Drowning
 - b. Working on rough terrain, steep banks or vertical drop without being secured to tie off point.
 - c. Failure to ensure sufficient tie off point (bridge railing, guard rail, tree trunk, vehicle, tower, etc.,).
 - d. Not supplying proper P.P. E. (i.e. Coast Guard approved life vest, jonboat, skiff, buoyant work vest, etc.,).
 - e. Hazards created by bodies of rapidly flowing water.
 - f. The possibility of flash flooding caused by periods of heavy rainfall.

L. RAILROAD PROPERTY SAFETY

1. All railroad property is private property and should be considered an ultra hazardous work area. Railroad property includes all tracks, yards, access roads and road crossings.
2. Before working within 100 feet of any railroad track, you must contact your General Foreperson. This is to be done to ensure that a proper job briefing has been conducted regarding job hazards. It should be determined at this time whether permission is needed from the railroad.
3. Employees and company equipment are only permitted to cross railroad tracks at public road crossings.
4. Employees must contact their General Foreperson before working within 100 feet of any railroad track!
5. If you should need any additional information concerning this memo please contact the Safety and Risk Management Department at the Canoga Park Office.

6. STORM WORK AND RELATED HAZARDS

Storm work and emergency conditions create special and often unknown hazards, particularly concerning electrical conductors. Safety is the first and foremost consideration. During a storm emergency, everyone is under great pressure to do a professional job for our customers and may have the perception that they are being hurried. Always be sure that the pressure and the rush do not influence your regard for safety. Remember—no operating condition or urgency of service can ever justify endangering the life of anyone.

Follow the guidelines listed below—they will help keep you from becoming a potential victim.

1. Upon arrival, assess your immediate job surroundings (Job Briefing). Always locate all electrical conductors to be sure there is no danger of contact. Be particularly aware of any conductive object that you may make contact with, such as chain-link fences, cable TV lines, guardrails, and fallen branches.
2. Assess the job at hand. If your crew is under-staffed for the situation, call for help. If you are the crew-leader, exercise your best judgment when assigning work. Remember - it is your responsibility as crew leader to be aware of the capabilities of the employees currently under your supervision. Don't put one of your employees in a position beyond their training capabilities.
3. Secure your job site. Keep all pedestrians away from the problem area. If fallen electrical conductors are present, barricade off the area. Always have someone guard the wires to prevent contact. DO NOT try to move a fallen conductor unless it is a life-threatening situation. Remember, this can only be done when a life-threatening situation exists and then only by using an insulated or non-conductive tool.
4. Treat all electrical lines as HOT and energized. This simple rule applies even if you come upon a situation where you see the electrical conductor lying on the ground and/or are instructed by a lineman that the line is dead. Portable generators have become popular as a means to provide electricity during power outages. Unfortunately, many people fail to properly connect them to the circuit panel of the house. This creates a situation where the generator is back feeding, which could energize the lines.

Lightning**When to act**

If you hear thunder and see lightning, act right away – especially if you count 30 seconds or less between the thunder and lightning. If the thunder gets louder or you see the lightning more often, the storm is getting closer. (Sometimes lightning will strike out of a sunny sky 10 miles or more from a storm.)

Lightning hits tall things, metal, and water – or a person standing on open ground or a roof.

Your worksite should have a plan for what to do in a lightning storm.

If a storm is near Do NOT:

- Be the tallest object in an area.
- Stand out in the open.
- Stand under a tree. (If the tree is hit, you can be too.)
- Stand in a gazebo or open shelter, like a baseball dugout or bus shelter.
- Stand next to metal objects – pipes or light poles or door frames or metal fences or communication towers – indoors or out.
- Stay next to water – ponds or running water – indoors or out. (Do not take a shower.)
- Use plug-in power tools or machines – indoors or out.
- Use a plug-in telephone (or a computer with a modem) – indoors or out.

Do:

- Get into an enclosed building – like a house or shopping center or school or office building.
- Get into a car, van, truck, or bus with the windows closed all the way. Do not touch the doors or other metal inside. (Open cabs on heavy equipment will not protect you. A convertible with the top up will not protect you. Rubber tires will not protect you.)

If you are out in the open and have nowhere to go, squat down with your feet together and only let your feet touch the ground. Put your hands over your ears (to protect against noise). That way, you are so low the lightning may hit something else. And by not touching much of the ground, you have less chance that the lightning will move across the ground to you. Do not lie flat on the ground.

Rule of Thumb: Do not go back to work outdoors until a half-hour after the lightning and thunder stop.

If someone is hit

Call emergency services (911).

A victim does not stay electrified. You can touch him/her right away. If the victim has no pulse, try CPR (cardiopulmonary resuscitation). But be careful about staying in the open in a storm to take care of the victim – or you can get hit too. If you can, move the victim to a shelter.

WOOD OR CONDUCTORS (LINES) UNDER TENSION

Storm conditions vary greatly throughout the country at all times of the year. When working in storm conditions one needs to be aware of the hazards associated with the work and be properly trained on how to safely work around or eliminate the hazards. One very dangerous hazard you may encounter during storm conditions is wood or electrical conductors under tension. This is a very dangerous condition and you must be properly trained on how to perform this work safely. Safety is our first priority and you must always consider the hazards associated with the job, work procedures involved, special precautions, energy source control and personal protective equipment requirements. Below are conditions and safe work methods that must be considered when working with a tension hazard.

Identify the tension hazard:

1. Entire trees or limbs bent or leaning.
2. Tree tops with heavy foliage or ice build up.
3. Conductors bent or pulled out of position from tree growth.

These are a few of the conditions when tension hazards exist and thoroughly discussing these conditions at every job site will help you identify unsafe conditions. If faced with these or other tension hazards, always discuss how to safely eliminate or work around the hazard and always use safe work methods and procedures to remove the hazard.

Methods to remove or safely work around tension hazards:

1. Use a pull rope to anchor or tie off the tree part to prevent unexpected movement during cutting or handling. (NOTE: never tie or anchor off to any vehicle).
2. Consult Utility customer for options to possibly drop power lines.
3. Remove tree parts to reduce tension load.

These are a few methods to remove tension wood hazards. Always consult with you General Foreperson if you are unable to identify and prepare a job briefing that will enable you and your crew to safely remove tension hazards.

Establish safe work areas:

1. Do not permit anyone to place body parts over tension hazards.
2. Know the projected resting-place of the wood being cut as well as its proximity to conductors when a tension hazard is being removed.
3. Saw Operators: Never operate a saw within 10 feet of another person.
4. Other Employees: Never approach closer than 10 feet to person operating a saw.

Tension hazards are not always immediately obvious and the methods to remove tension hazards vary. Make sure your crew is properly trained and thoroughly understands how to identify, safely work around or eliminate tension hazards. Always use safe work procedures and follow company policies to prevent employee injuries and property damage. Always conduct a thorough job briefing covering, hazards associated with the job, work procedures involved, special precautions, energy source control and personal protective equipment requirements.

N. ALLERGIC REACTION – INSECT BITES**Action: If you know you are allergic to insect bites:**

An allergic reaction (anaphylaxis) begins within 1 to 15 minutes of a bite. Anaphylaxis can lead to collapse, stopped breathing, seizures, and loss of consciousness in 1 to 2 minutes.

This reaction can be fatal.

- **Before starting work**, tell all your co-workers that you are allergic.
- **Before starting work**, tell all your co-workers where you keep your auto injector (EpiPen®/Anapen®).
- **Keep your auto injector nearby** – on your person, or on your truck.
- **Follow the manufacturer's instructions** for storage, use, and disposal of your auto injector.
- **If you are stung, do not delay:** Immediately inject the epinephrine. Follow package instructions on how and where to inject this device. The injection should be effective for 10 to 15 minutes.
- **Go to a hospital for emergency treatment!**

Action: If you don't know if you are allergic to insect bites:

- Report the incident immediately to your Crew Foreperson. If symptoms appear, go to a hospital for emergency treatment.

Symptoms of insect bite allergy:

- Swollen throat, lips, tongue, or eyes
- Wheezing, difficulty breathing
- Hoarseness, coughing, tightness in chest
- Confused thinking or speech
- Difficulty swallowing, slurred speech
- Abdominal cramps, nausea, vomiting, or diarrhea
- Weakness, fainting
- Metallic taste or itching in the mouth
- Fast heart rate
- Previous severe allergic reaction to insect bites

B. Assessment - Always perform an assessment looking for insect activity around the work site.

- Be alert for insects coming in and out of an opening such as a crack in a wall, or the hole in a utility box.
- Listen for the hum of an active bee colony.
- Look for bees in holes in the ground, holes in trees or cacti, and in sheds.
- If encountering a bee's nest try to work in the early morning or skip for the next day.

C. Emergency Situation - The best method of escaping a bee attack is to cover your head and run for shelter.

- Bees target the head, and stings to this area overcome nearly all those who suffer serious stinging incidents.
- Any covering, especially for your head and face, will help you escape. A small handkerchief or mosquito net device that fits over the head could easily be carried in a pocket.
- If you do not have these, grab a blanket, coat, and towel, anything that will give you momentary relief while you look for an avenue of escape. If you have nothing else, pull your shirt up over your face. Stings to your chest and abdomen are far less serious than to your face.

- Try to find shelter as soon as possible. Take refuge in a house, tent or a car with the windows and doors closed.
- DO NOT JUMP INTO WATER! Bees will wait for you to come up for air.
- Remove stingers as soon as possible to lessen the amount of venom entering the body. Scrape stingers off the skin with a blunt instrument or plastic card. Do not remove bee stingers with fingers or tweezers - this only forces toxins into the victim's body.
- Carry and use an epi-pin if stung and are allergic to bee's venom. Immediately proceed to the hospital regardless how you may feel!
- If you get stung, notify co-workers to monitor your symptoms.
- Always warn other co-workers of the presence of bees.

O. VINES

Hazards and problems associated with vines are numerous. They have the potential for power interruption, wires being mistakenly cut as growth, deflection of tools causing injury and indirect contact with a potentially fatal outcome to name a few. Vines are an identifiable hazard and must be properly addressed in the job briefing prior to beginning of work. Vine topics should include the following items;

- Vine density; they can be heavier than they appear.
- Identifying vines entangled in conductors.
- Direct and Indirect contact
- Positive identification of utility assets and lines.
- The absence or condition of spreaders on secondary lines.
- The amount of sag on a line due to the weight of vine growth.
- The effect of the lines raising once the weight is removed.
- Identifying those vines that may be a not so obvious direct path to ground.
- Ensuring the tools/pruner is sharp with a precise cutting action.
- Safe disposal of vines.

The accepted method for trimming of vines is relatively simple and is as follows;

1. ***Cut vines high and then cut vines low!***
2. This means first cut the vine(s) below the secondary lines and then cut the vines at the ground or source.
3. Treat growth source with contract approved herbicide.
4. Leave remaining vine growth in wires as they will quickly die and fall off. Never pull on vines entangled in energized lines.

In the event there are contract specific requirements for total removal; the following shall apply:

1. If the vine growth can be done in a safe and effective manner as described above, then proceed.
2. If needed, request a scheduled outage to prevent an unscheduled one and potential injury.

Remember: ***"Cut vines high and then cut vines low!"***

VI. WORKING SAFELY WITH TOOLS

So that you can do the best job possible, good tools are supplied by the Company. Don't defeat the purpose! See that they're properly used and maintained. OSHA specifically prohibits the use of defective tools.

A. LADDERS

1. Only ladders approved by the Company shall be used.

2. Use of ladders. Ladders shall be used according to the following:

- a. Place feet of ladder parallel with top end of risers and on a solid footing.
- b. If the ladder is likely to shift or slip while it is being climbed, it shall be steadied by someone on the ground.
- c. The feet of the ladder shall be placed a distance from the tree equal to about 25% of its vertical extended height.
- d. A ladder shall not be climbed by one person while it is being held in an unsupported vertical position by another.
- e. Ladders shall not be leaned against overhead wires, cable or conductors.
- f. Never leave a ladder in a position from which it may fall.
- g. Never leave a ladder where it presents a tripping hazard.
- h. A ladder shall not be used to support weight in a horizontal position.
- i. A defective ladder shall not be used.
- j. A ladder shall be lashed in place to the tree while a person is working from a ladder.
- k. Persons climbing or working from a ladder on a tree shall be tied in.
- l. When a climber is working in a tree, remove the ladder from the base to prevent damage to the ladder from falling limbs.
- m. Ladders shall not be painted.

3. Principal Hazards

- a. Falls, caused by -
 - (1) Working from ladder without being tied in.
 - (2) Climbing unsteadied ladders placed on uneven footing or against a vertical support that causes the ladder to twist.
 - (3) Climbing broken or defective ladders.

4. Care and maintenance of ladders

- a. Ladders shall be inspected before use. Those that are defective shall be immediately removed from service until they can be repaired or replaced. They shall be checked for:
 - (1) Broken or split risers.
 - (2) Broken, split or missing rounds.

B. ROPES**1. *The ropes used in our Company are synthetic and are especially made for line clearance. No other ropes shall be used.***

- a. These ropes are issued in two sizes: one-half inch, and five-eighths inch. The 1/2 inch shall be used either as a climbing line or hand line but not interchangeably! Our 1/2 inch Polyester rope has a breaking strength of approximately 5500 pounds.
- b. The 5/8 inch polyester rope is used as a bull rope for heavy rigging and has a breaking strength of approximately 10,000 pounds.
- c. All strengths given are for new ropes. Age, dirt, and the use of knots, or the presence of kinks in the rope can lower these figures considerably. A SAFE LOAD LIMIT OF 450 POUNDS SHALL BE USED FOR ALL 1/2 INCH ROPES AND 1000 POUNDS FOR ALL 5/8 INCH ROPES.

2. *Use of ropes*

- a. A crew member's climbing line should not be used by anyone else except in an emergency. After a climbing line has been removed from service it may be used as a hand line.
- b. In no case shall a hand line be used as a climber's line.
- c. Do not use wet ropes when working in close proximity to energized conductors.
- d. Ropes shall be regularly inspected under the forepersons supervision.
 - (1) Before use, inspect for:
 - (a) Breaks or cuts in outside fibers.
 - (b) Excessive wear, with particular attention to the tail. (If breaks, cuts or worn spots are not too far from the end of the rope, they may be cut off. Otherwise, the rope shall be replaced.)
 - (c) Dull or dirty fibers inside the rope. When rope is twisted or "laid" open, the inside fibers should be reasonably bright and clean. If they are dull and dirty looking, the rope has lost its original strength and shall be replaced.
 - (2) At any time damage is suspected to have occurred.
- e. The climber's line shall be equipped with a company approved safety snap and thimble secured by a bowline.
- f. Each climber shall use a saddle authorized for use by the Company.
- g. Each climber shall use approved safety straps whenever working aloft.
- h. A safety strap shall be used in conjunction with a climbing line, especially in palm or other trees in which a good crotch is not available.
- i. A Figure 8 knot shall be tied in the tail of the climber's line between the snap and the point at which the Taut Line is tied. This will readily identify the piece to be cut should a climber have to be rescued from a tree.
- j. The rope shall be coiled as it is pulled from each tree, to prevent tangling or dragging on the ground.
- k. When descending on a climbing line out of a tree, keep the speed of descent low so better control is maintained. Running synthetic rope too fast through a knot or a crotch will cause it to burn.
- l. A rope used to tow vehicles, shall not be used in trees again.

- m. Hand lines, bull ropes, etc., shall *never* be wrapped around the arm or any other part of the body to provide a better grip.
- n. All persons shall be kept clear of a rope or cable under heavy strain, and clear of any part of such rope or cable that is lying on the ground.

3. Principal Hazards

- a. Falls, caused by-
 - (1) Improper crotching of climbing rope.
 - (2) Failure to inspect rope and properly dress worn ends.
 - (3) Working with defective or damaged rope (often caused by storing with sharp edged tools).
 - (4) Working with climbing rope too short for tree. The climbing line should be twice as long as the crotch you are tying into is high.
 - (5) Slips in tree while working with slack in climbing rope, or rope crotched too far from vertical.
 - (6) Cutting climbing line while working.

4. Care of ropes

- a. Ropes shall be coiled for storage.
- b. Ropes shall not be stored, or brought in contact with sharp edged tools, equipment or any other objects or material that might damage them.
- c. Inspect rope before each use; do not use if damaged.
- d. Ropes shall be kept free of gas, oil, grease, acids or any other chemical or material that may cause any harm to the rope fibers.
- e. Ropes shall be kept as free of dirt and grit as possible, as dirt cuts or causes abrasion to fibers inside the rope.
- f. Ropes should be "broken in" by normal use. Although a new rope shall be "stretched" by hand power only, it shall never be "stretched" by pulling with a truck or other mechanical means.
- g. Kinks shall be "turned" out of a rope, not pulled or stretched out.
- h. Ropes shall be kept clear of saw blades and gaffs to avoid cuts and nicks that would weaken them.
- i. Climbing ropes shall be turned end for end on the snap at least once each week to evenly distribute wear.

C. HAND SAW

- 1. Use of the saw. These are simple tools, but they must be handled properly, if they are to be used efficiently and safely.
 - a. A saw will cut only so fast. Any attempt to force it through or make it cut faster will generally result in binding and buckling the saw-and may produce an injury.

- b. Any saw must be kept straight in the cut, or it will buckle or bind.
- c. A slight down pressure on the blade will prevent the rake of teeth from “jumping” the saw out of the cut.
- d. The free hand shall be kept away from the cut, so that, if the saw should jump out of the cut, it won’t result in an injury.
- e. Knees shall be kept well out of the way of the sweep of the saw. If they aren’t, a slip may produce a severe wound.
- f. Care shall be used in descending from a tree to prevent the saw from being thrown into the body or face by a branch.

2. Principal Hazards

- a. Electric shock caused by bringing blade in contact with conductor or by knocking hanger off conductor with hand saw.(working too close to conductors)
- b. Lacerations caused by working with hands, arms or legs too close to a cut or the sweep of the blade.

3. Care of hand saws

- a. Don’t use the cutting edge of the saw blade to knock off dead stubs or branches.
- b. Avoid bending saw blade. A bent saw blade tends to bind in the cut.
- c. Do not throw or drop saws from trees.
- d. Store saws in sheath and properly place away from ropes.

D. POLE SAW**1. In using the pole saw:**

- a. Pay strict attention to your position in relation to the conductors.
 - (1) Particular attention shall be paid to the climber’s position and the possible position of arms and legs in relation to the conductors, so that in maneuvering the pole pruner contact with the conductors will not result.
 - (2) Conductors and branches often look alike! Care shall be taken to keep track of where the conductors are, so that one won’t be cut.
- b. When hung in a tree, the pole saw shall be hung securely with the sharp edge away from your body.
- c. A pole saw shall never be hung on a conductor of any kind.
- d. Pole saws shall not be painted or wrapped with electrical tape.
- e. Only Company approved saws shall be used.

2. Principal Hazards

- a. Falling saw caused by improperly hanging saw in tree.
- b. Splinters from pole.
- c. Using unapproved equipment

3. Care of pole saws:

- a. Blades shall not be stored loosely with other tools or ropes.
- b. Poles with blades attached shall not be stored in a position in which they can cause injury to a person passing by or moving around the truck.
- c. Only Company approved poles shall be used as a replacement for a broken pole.

E. POLE PRUNER**1. Use of the pruner**

- a. Keep fingers out of the hook of the pruner. Never pull the pruner off the truck or up a tree, or drag it along the ground by putting a finger in the hook, or by grasping the end of the pole just below the hook, since the sash cord can too easily catch on something and operate the blade.
- b. Particular attention shall be paid to the climber's position and the possible position of arms and legs in relation to the conductors, so that in maneuvering the pole pruner contact with the conductors will not result.
- c. Conductors and branches often look alike! Care shall be taken to keep track of where the conductors are, so that one won't be cut.
- d. Poles hung in a tree must be hung securely, so that they can't be knocked off or fall.
- e. A pole pruner shall never be hung on a conductor.
- f. Pruner poles shall not be painted or wrapped with electrical tape.
- g. Only Company approved poles may be used as a replacement for a broken pole.

2. Principal Hazards

- a. Cuts caused by -
 - (1) Improperly hanging pruner in tree.
 - (2) Improper handling of the pruner by grasping the pruner by its head, or with a finger in the hook.
- b. Splinters from pole.
- c. Grabbing if unintentionally dropped.

F. CHAIN SAW**1. Federal Law (OSHA) requires that CHAIN SAW OPERATORS be instructed as follows:**

- a. To inspect saws daily to assure that all handles and guards are in place and tight, that all controls function properly, and that the muffler is operative.
- b. To follow manufacturer's instructions as to operation and adjustment.
- c. To fuel the saw only in safe areas and not under hazardous conditions: such as near smoking, hot engine, etc.
- d. To hold the saw firmly with both hands during operation.
- e. All employees, including other saw operators, must maintain a 10 FT. separation distance from anyone operating a power saw.
- f. To start the saw only on the ground or when otherwise firmly supported, if working aloft.
- g. To be certain of footing and clear away brush or debris which might interfere, before starting to cut.
- h. To wear approved chain saw chaps, while operating a chain saw on the ground.
- i. To shut off the saw when carrying it in hazardous conditions such as slippery surfaces or heavy underbrush.
- j. To carry the saw in a manner to prevent contact with the chain and muffler.
- k. *Not* to use the saw to cut directly overhead, or at a distance that would require the operator to relinquish a safe two-handed grip on the saw or to work off balance.

2. Use of saw

- a. When the saw is running, the operator and others involved in the cutting operation within 25 feet shall wear hearing protection.
- b. Operators shall wear eye protection, hearing protection, power saw chaps (when on ground) and hard hats.
- c. Do not attempt dangerous cuts. If the saw operator and anyone assisting cannot be positioned safely, the chain saw shall not be used.
- d. The bar handle of the saw shall be gripped firmly with the thumb under the bar (on the opposite side from the fingers) to prevent the hand from slipping off into the chain.
- e. Chain saws having an operating weight less than 15lbs. may be carried aloft in a tree by means of a rope attached to the saddle and without the use of a hand line, but shall not be operated while attached to the saddle or to any part of the worker's body.
- f. Chain saws having an operating weight of over 15lbs. shall be raised aloft with a handline by a second worker on the ground. The saw shall be tied to this hand line while in use.

- g. Always hold the chain saw firmly with both hands to protect against possible injuries which can be caused by kickback, skating and bouncing. Follow through after the cut, to prevent loss of balance and loss of control. Be aware of the downward or outward path the saw will take after the wood is cut. Keep your body parts out of this path.
- h. Avoid cutting with the tip of the saw. This will prevent kick-back.
- i. When felling and bucking, the work area shall be free of brush, vines and debris that affect safe operation.
- j. During a felling operation, never allow another worker to lean or reach across the saw to push the tree over.
- k. Small brush should not be cut with a chain saw. It will whip or catch in the chain causing the saw to kick out of control.
- l. Saws shall be carried with blade to rear and the muffler away from the leg.

3. Fueling the saw

- a. Fuel shall be carried only in approved and properly labeled containers.
- b. Stop engine and allow saw to cool a few minutes before refueling.
- c. Do not smoke while refueling.
- d. Wipe spilled fuel off the saw.
- e. Do not start the saw within 10 ft. of the fueling area.

4. Principal Hazards are:

- a. Cuts from chain caused by:
 - (1) Saw binding in cut and kicking back.
 - (2) Tip of bar striking object, causing saw to be thrown violently upward. (kick-back)
 - (3) Loss of control of saw caused by one hand operations, drop starting, or slips or falls.
 - (4) Hand slipping off the upper handle into chain.
 - (5) Operator failure to wear approved leg protection.
- b. Falling trees.
- c. Rolling logs.
- d. Blowing wood particles and sawdust.
- e. Noise exposure.

5. Care and maintenance of the saw. The saw shall be maintained according to the following:

- a. Keep it in good condition so that it's easy to start, and so that the chain will not move when the saw is idling.
- b. Keep it clean - free of spilled or leaking gas/oil, and sawdust to avoid the hazard of fire, and to provide the best grip.
- c. Keep the chain sharp and properly adjusted on the bar.
- d. Gloves shall be worn when sharpening the chain.
- e. Hold hands and arms high when sharpening the chain, so that they won't be raked over the teeth.
- f. Transportation and storage of chain saws.
 - (1) The fuel shall be drained from the tank and run out of the carburetor whenever a saw is to be stored, or transported in a vehicle that does not have a designated tool/saw compartment.
 - (2) Store so that it will not move in transit.
 - (3) Do not store with ropes.
 - (4) Never transport a saw in the crew compartment.

G. AXE AND BRUSH HOOK

1. Use of axe and brush hook

- a. The user shall wear eye protection.
- b. These tools shall be swung away from the body-not toward it.
- c. The worker shall be sure that there are no objects such as low branches above or behind that might deflect the tool being used.
- d. These tools shall be swung hard enough to make the cut, but no harder. To do otherwise will produce the uncontrolled swing which can produce injury.
- e. Crew members using these tools shall be kept far enough apart to prevent injury to each other. The Company policy is 10 feet.
- f. Sharp-edged tools are not to be placed where they are likely to be contacted and cause an injury.
- g. Axes shall not be used in trees.
- h. Axes shall not be used as sledge hammers.

2. Principal Hazards

- a. Cuts inflicted while sharpening.
- b. Cuts inflicted by improper use of tool.
- c. Cuts caused by improper placement of tool.

3. Care and Maintenance

- a. All sharp-edged tools shall be kept sharp, otherwise a dull tool is hazardous as it is worked so hard that it becomes uncontrollable.
- b. Gloves should be worn when sharpening these tools.
- c. Sharpening files should be sharp. Dull files will slip.
- d. Sharp-edged tools shall not be stored with ropes and climbing gear.
- e. Axes, brush hooks and sledges shall not be used with cracked heads or split or loose handles.

H. WEDGES AND SLEDGE HAMMERS**1. Use and Care**

- a. The user shall wear eye protection.
- b. Wedges and sledges shall be kept “dressed” or free of mushroomed heads. As pieces of steel turn over to form the mushroomed head, they tend to break off and fly in any direction. These projectiles can cause serious wounds.
- c. Crew members using these tools shall be kept far enough apart to prevent injury to each other. The Company policy is 10 feet.

2. Principal Hazards

- a. Flying pieces of metal caused by using mushroomed head.
- b. Being struck by a deflected sledge hammer.

I. BRUSH SAWS**1. Use**

- a. Hearing and eye protection and a hard hat shall be worn by brush saw operators and all others positioned within 25 feet of the saw operation.
- b. The saw shall be attached to the operator’s harness by a snap or hook equipped with a self operating keeper in working condition. Operation of a brush saw without such attachment using the 2-hand hold practice shall be specifically prohibited.

- c. Other people and animals shall be at least 25 feet from saw operator during all operations, including starting.
- d. Brush area being cut shall be continually inspected to avoid contact with rocks and foreign matter, particularly wire.
- e. Saw shall *a/ways* be removed from operation and allowed to cool for a few minutes before refueling.
- f. Smoking shall be prohibited within 25 feet of the refueling operation.
- g. Gas tank shall never be more than 3/4 full. Vibration may cause gas from a full tank to spray out of the vent in the gas cap.
- h. Particular care shall be taken to keep operator's clothing free of gas and oil. If contamination should occur, the worker shall be kept absolutely clear of heat, flame and sparks or any other source of ignition; contaminated clothing shall be removed as soon as possible.
- i. Gloves shall be worn when changing blades.
- j. Check at regular intervals for fuel leaks, the condition of the cutting blade, and loosening fasteners.

2. Principal Hazards

- a. Cuts or ricochets caused by workers working closer than 25 feet apart, and by careless or improper use.
- b. Burns caused by-
 - (1) Hot muffler.

J. HYDRAULIC TOOLS**1. Use**

- a. The same operating rules used for similar non-power tools shall be followed.
- b. Operators shall wear a hard hat, eye & hearing protection.
- c. Hydraulic tools shall never be worked on when connected to power supply, unless approved repair procedure requires it.
- d. Power tools shall be disconnected from power supply when not in use.

2. Principal Hazards

- a. Refer to similar non-power tools.
- b. Working without eye protection.
- c. Working too close to wires, cables or conductors with tools.
- d. Repairing or adjusting tools while they're connected to power supply.

K. CLIMBERS WITH GAFFS

1. ***The use of climbers is to be avoided.*** When their use is required (as in the removal of some trees or in climbing trees which do not provide a crotch in which to tie in) only qualified persons shall be permitted to use them.
2. ***Only company approved climbers designed for trees shall be used.***
3. ***Inspection and maintenance***
 - a. Gaffs shall be kept sharp in accordance with the manufacturer instructions. Instructions are available through your General Foreperson.
 - b. There shall not be a variation between gaffs' lengths on a pair of climbers of more than 1/8 inch.
 - c. Gaffs shall be sharpened with a hone or a smooth, single-cut file, never a grinding wheel, as this may destroy the temper of the steel and cause it to be brittle.
 - d. Climbers shall be inspected before use or anytime there is reason to believe they have been damaged.
 - e. Climbers shall be inspected for:
 - (1) Sharpness, length and shape of gaff.
 - (2) Cracked, bent or burnt gaffs, or chipped gaff points.
 - (3) Cracked, broken or loose leg irons.
 - (4) Excessive wear of the leg irons or straps.
 - (5) Loose adjustable sleeves.
 - (6) Cuts, breaks, rot, broken stitching, missing screws, enlarged eye holes or broken, worn or damaged buckles in the straps.
 - (7) Climbers which may be unsafe for these or any other reasons shall be immediately removed from service.
4. ***Principal Hazards***
 - a. Cuts (inflicted by gaff).
 - b. Fall from tree after "kick-out."
 - c. Contact with energized tree
 - d. Improperly maintained

VII. WORKING SAFELY WITH EQUIPMENT

A. Our equipment is specifically designed for our particular kind of work and is the best available for the job. But, equipment is only as good as the condition it's in, and the work a crew does usually isn't much better than its equipment! Does yours really look like the quality crew you want to run? If it doesn't, it is your responsibility to correct it.

B. OPERATOR MANUALS

1. **All specialized pieces of equipment such as Prentice Loaders, Skid Steer, Stump Grinders and all types of tractors and mowing equipment, etc. SHALL HAVE OPERATORS MANUALS KEPT ON THAT CREW AT ALL TIMES.** Manuals for specialized equipment may be kept either on a support vehicle or on the equipment. In the event you do not have the manual for your specialized piece of equipment, contact your local dealer or General Foreperson and obtain one.
2. **All Aerial Devices SHALL HAVE THE PROPER MANUAL(S) FOR THAT MODEL** Aerial Device. The manual(s) must be kept on the piece of equipment AT ALL TIMES.
3. **All Aerial Devices SHALL HAVE A PONY ENGINE MANUAL**, if equipped with a pony engine. THIS MANUAL MUST BE KEPT ON THE AERIAL DEVICE at ALL TIMES.
4. **All crews using a Chipper SHALL HAVE A CHIPPER MANUAL.** THIS MANUAL SHALL BE KEPT ON THE VEHICLE TOWING OR HAULING THIS PIECE OF EQUIPMENT AT ALL TIMES.
6. **All Forepersons shall have a Foreperson's Manual.** All Foreperson's Manuals shall be the current Edition, with all revisions (updates) inserted. THIS MANUAL SHALL BE KEPT WITH THE CREW AT ALL TIMES.

OPERATING AND MAINTENANCE MANUALS-

Make sure you have the proper manuals for the specific equipment you are operating. If you do not have a manual or are missing manual on your truck contact your General Foreperson.

TRUCKS AND VEHICLES

1. **All trucks and vehicles shall be driven by legally licensed drivers with the correct classification whose licenses are in full unrestricted status.** Unlicensed drivers, unqualified drivers or drivers whose licenses have been suspended shall not be allowed to operate Company-owned or Company-leased equipment.

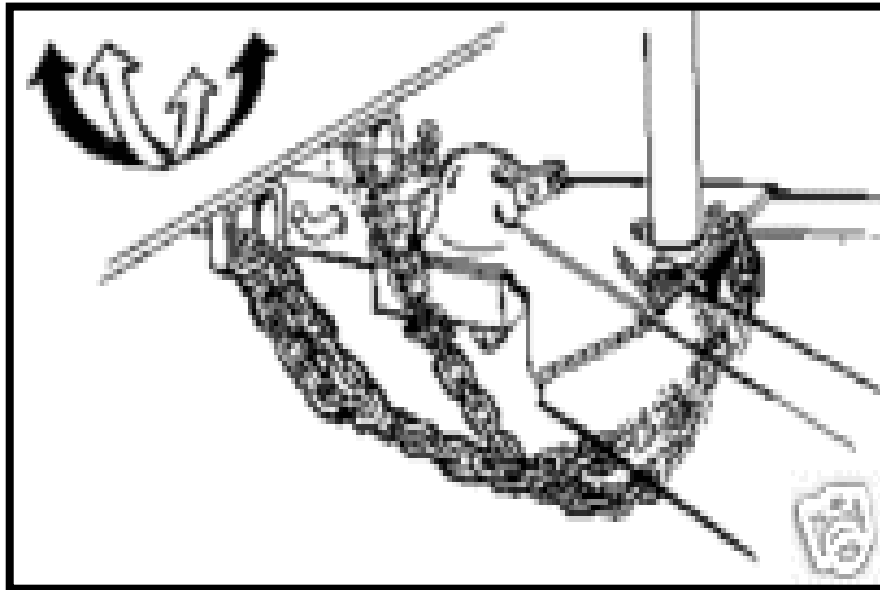
2. ***Operators and passengers shall wear seat belts at all times.***
3. ***All trucks and vehicles shall be equipped and operated in full compliance with all state and local laws and regulations.***
4. ***The proper registration card and insurance card shall be carried in the truck at all times.***
5. ***All safety and operating devices shall be maintained in good working order.***
6. ***Retreads shall not be used on front wheels.***
7. ***All tires shall be sound and have good tread.*** Federal Department of Transportation Safety Regulations and company policy prohibit vehicle use when:
 - a. Fabric is exposed through the tread or sidewall or major gouges exist.
 - b. Any front wheel tire has a tread groove pattern depth of less than 4/32 inch measured at any point, edge to edge, across the tread groove. The measurement shall not be made over a tread wear indicator tie bar, hump, etc.
 - c. Any tire other than the front wheel tire has a tread depth groove less than 2/32 inch measured as in "b" above.
 - d. Any tire is inflated to less than the pressure required for that vehicle. Chipper tires shall have approved load ratings.

SEE YOUR GENERAL FOREPERSON WHEN YOUR COMPANY VEHICLE IS NOT IN COMPLIANCE!
8. ***Workers shall not be permitted to ride outside of or on top of the vehicle or its load*** unless they are riding in a designated place required by the nature of the operation, such as roadside spraying.
9. ***Any vehicle which obstructs the operators vision to the rear shall not be backed without help.***
10. ***A warning flag shall be displayed at the end of any load which overhangs a truck or trailer by four feet or more during daylight operation.*** Nighttime operation requires special lighted warning devices. Contact equipment and purchasing for approved devices.
11. ***The load shall not block the legal lights and license plates, nor restrict the driver's vision.***
12. ***A load of chips shall not be left in the truck for extended periods*** as spontaneous combustion can, and has, set them afire.
13. ***Wheel chocks shall always be used when a truck is parked and being worked on or from.***
14. ***Trucks shall not be driven on private property until permission has been received from the property owner and a check made for underground services that could be damaged by the weight or movement of the truck.***
15. ***The emergency brake shall be engaged when the operator is out of the cab.***
16. ***Always back into dead-end streets, and driveways when used for off-street parking,*** since this insures quickest response to emergency or the property owner's need to use the drive.
17. ***Every driver of any The Company-owned-leased vehicle is required to drive with their headlights on at all times.***

18. ***When towing a trailer, use trailer chains as a backup connection.*** The illustration below shows the right way to configure trailer chains.

- a. The chain from the left side of the hitch is hooked to the right side of the tongue.
- b. The chain from the right side of the hitch is hooked to the left side of the tongue.

In other words: The chains are crossed as they pass each other between the vehicle and the trailer. This way, if the trailer comes unhitched, the tongue and coupler will land on the crossed chains instead of landing on the road and skidding out of control.



19. Principal Hazards

- a. Traffic incidents.
- b. Falls caused by: Riding in unauthorized place.
- c. Backing without guidance.

D. CHIPPERS**1. Operation**

- a. Approved eye protection shall be worn by the chipper operator(s).
- b. Approved hearing protection shall be worn by the chipper operator(s) and all others within 25 feet of the chipper.
- c. The chipper operator shall not work under a tree which is being trimmed.
- d. Gauntlet type gloves (protective gloves with a flared cuff above the wrist) and loose clothing shall not be worn by a chipper operator.
- e. The chipper shall always be fed from the back corner, or side of the feed table – never from directly behind the center portion of the feed table. As the brush or wood is taken into the blades the operator shall immediately turn away from the feed table to avoid being struck by whipping branches, or chunks of wood.
- f. Brush shall be fed butt-end first.
- g. Small pieces of brush or wood shall be pushed through the chipper with a push stick or branch, never the hands, feet, rake, or pruner pole etc.
- h. No part of the body shall ever be placed on the feed table while the chipper is running.
- i. Chippers used on dedicated roadways shall always be fed from the curbside of the road.
- j. The chipper ignition shall be locked and the key removed whenever the unit is left unattended.
- k. A chipper shall never be operated without proper belt guards, protective covers and feed table shrouds in place.
- l. No one shall work on or place any part of their body inside the chipper for any reason until the rotor has come to a complete stop, engine is stopped, key removed, battery terminals disconnected, fuel line turned off and the ignition coil is removed.
- m. Under no circumstances shall any part of the body be placed under the belt guards unless the unit is *fully* stopped with the rotor at rest. Even when the rotor is barely moving, a hand caught between the belts and sheave can be severely *mutilated*.
- n. A trailer chipper shall not be hitched or unhitched from a truck without sufficient help.
- o. Before any trailer chipper is towed on a public roadway the hitch safety chain and electrical connections shall be properly attached, with the chains crossed and all lights functional.

- p. A parked, unhitched trailer chipper shall have both main wheels blocked to prevent rolling. Just wrapping the safety chain around the third wheel is not enough.
- q. No one shall ride on any part of the chipper.
- r. All persons shall be kept clear of the exhaust chute when the chipper is running.
- s. The engine, particularly the manifold and exhaust area, shall be kept free of chips and sawdust to prevent fire.
- t. When there is a fire hazard, do not operate in high, dry weeds or grass without first clearing this growth from the motor and exhaust area.
- u. Tools, signs, etc. shall not be carried on the feed table or chipper frame when moving the equipment unless designated and registered as applicable.
- v. Gloves should be worn when changing chipper blades.
- w. When changing or adjusting blades, the rotor shall be turned by inserting an appropriate tool in the rotor turning holes and turning it - *never* by grasping the blades or drum with the fingers or hands.
- x. Make sure trailer jack stand is in place and operable before attaching or detaching the chipper.
- y. Retreads shall not be used on chippers or trailers.
- z. All maintenance must comply with the operator's manual (e.g. blade changing using rotor rotation tool.)

2. Principal Hazards

- a. Contact with blades - feed table side - possible causes:
 - (1) Getting up on, reaching into, or leaning into the feed table.
- b. Contact with blades - exhaust side - possible causes:
 - (1) Operating chipper with exhaust chute removed.
 - (2) Reaching into "transition" with exhaust chute removed.
 - (3) Removing exhaust chute or opening "transition" while rotor is still turning.
 - (4) Improper procedure while changing or adjusting blades.
- c. Struck by wood thrown from chipper when:
 - (1) Working directly behind the feed table.
 - (2) The shrouds are not in place.
- d. Strains while attaching or disconnecting chipper from truck.
- e. Hands, arms or legs caught in belts (operating with belt guard not in place).
- f. Mechanical failure from worn or damaged eyes, hitches, and/or tongues.

E. AERIAL DEVICES**1. General operating policy.**

- a. The safety features built into Aerial Devices are to be considered as additional protection only. They are not to be used as a means enabling the operator to ignore existing safety rules and safe work procedures.
- b. Never touch any conductor, or any conductive material in contact with a conductor, except with a *non-conductive* tool.
- c. The booms shall not be brought in contact with any wires, cables or conductors. Tree parts are exempt.

2. Operation of the Aerial Device. In addition to the requirements outlined in the previous paragraph, the Aerial Device must be operated according to the following Do's and Don'ts.

DO: Wear a hard hat and approved safety glasses at all times when work is in progress.

DO: Always, tie in with the appropriate lanyard and body harness approved for the aerial device you are operating.

DO: Keep booms off all wires, cables or conductors. Tree parts are exempt.

DO: Stay 6 feet or more from conductors when possible.

DO: Pay particular attention to whipping branches. You are working with power tools from a power operated platform which can easily spring a heavy branch.

DO: Look and give an audible warning BEFORE dropping or lowering branches.

DO: Be sure branches you drop won't damage property. Use roping techniques when necessary to control loads.

DO: Disconnect or divert power from hydraulic tools when they're not in use.

DO: While working from a bucket have tools in proper place, or keep a secure grip on them while maneuvering.

DO: Always use approved pads for support under outriggers.

DO: Face direction of travel while operating bucket.

DO: When booms are over the roadway, maintain safe clearances from passing vehicles and or provide traffic control.

DO: Keep outriggers in sight when lowering, and give an audible warning.

DO: Keep insert and upper boom clean -*inside* and outside.

DO: Always check to be sure booms are down and completely folded up, before moving truck.

DO: Use upper boom tie down strap (if equipped), once booms are completely folded.

DO: Chock wheels, set hand brake, put vehicle in gear, remove keys and lock doors whenever the Aerial Device is left unattended.

DO: Keep auxiliary motor and pedestal area clear of debris to prevent fire.

- DON'T:** Operate booms unless outriggers are down and properly supported.
- DON'T:** Operate when truck is on slippery surface (ice or snow) unless steps are taken to prevent the truck from sliding.
- DON'T:** Operate without a basket liner.
- DON'T:** Operate with more than one person in the bucket unless the bucket is designed for it.
- DON'T:** Run booms into wires, cables or conductors.
- DON'T:** Cross conductor to conductor or conductor to ground with yourself or anything else.
- DON'T:** Touch a conductor. Never touch a hanger on a conductor, except with a non-conductive tool or a clean, dry rope.
- DON'T:** Load bucket beyond its rated capacity.
- DON'T:** Attempt to locate by feeling for or for any reason put any part of the body over, a hydraulic leak. A fine stream of oil under pressure could penetrate the skin and cause a severe injury.
- DON'T:** Work on, or otherwise touch, any part of the aerial device while equipment is in operation, if any electrical contact can be made.
- DON'T:** Get on top of truck, screen or pylon box when equipment is in operation.
- DON'T:** Run any conductive material, such as electric cable, from truck to bucket.
- DON'T:** Allow branches or any conductive material to rest on the lower boom.
- DON'T:** Ride in bucket while truck is being moved.
- DON'T:** Service power tools when they are connected to the power supply, unless required to do so by approved procedures.
- DON'T:** Drill or cut holes in the bucket or liner.
- DON'T:** Use anything but approved replacement parts when making repairs. Only approved parts contain safety and stress factors necessary for the safe operation of the equipment.
- DON'T:** Touch any part of the equipment if either boom is in contact with conductors or the equipment is being used adjacent to conductors.
- DON'T:** Mount a radio antenna in any location where it could be contacted by the lower boom.

Aerial Lift Operations Near Energized Conductors - Clarification of Rules

When maneuvering an aerial lift the following requirements must be adhered:

A bucket shall never be maneuvered between two energized primary conductors on the same structure (vertically or horizontally) under **any** circumstances. No exceptions allowed!

A bucket shall only be permitted to maneuver between an energized primary conductor and a neutral/secondary conductor, when the following conditions can be met. No other exceptions will be allowed!

The bottom of the basket maintains minimum approach distance from the neutral/secondary conductor - allowing for bucket/boom bounce.

The bucket operator maintains the minimum approach distance to the overhead energized primary conductor(s) allowing for bucket/boom bounce (*operator must be standing fully erect; crouching or bending to obtain proper minimum approach distance is prohibited*).

The bucket operator shall notify ground personnel when they are maneuvering between conductors and shall request a spotter when needed and when identified in the job briefing.

Hydraulic booms (upper/lower), bucket, and the knuckle shall maintain required "*Minimum Approach Distance*".

3. Care and Maintenance of the Aerial Device

- a. The Aerial Device shall be operated, inspected and maintained in strict accordance with this manual, and with any other pertinent manuals or instructions supplied for the unit being operated, and these reference materials shall be *kept* on the Aerial Device.
- b. The unit shall be systematically and visually inspected daily and documented using the approved INSPECTION FORM which is to be filled out and retained as required.

4. Principal Hazards

- a. Electric contact caused by improper operating procedures.
- b. Equipment failure caused by lack of, or inadequate, inspection and/or maintenance procedure, or equipment abuse.
- c. Pinhole hydraulic leaks causing hydraulic oil (under pressure) to penetrate skin, causing potentially serious injury.
- d. Falls from bucket caused by lack of inspection and maintenance procedures or by failure to tie into bucket with full body harness and lanyard.
- e. Booms struck by passing vehicle.
- f. Truck rolling free, because of lack of chocks, or misadjusted or defective parking brake, etc.
- g. Highway incidents.
- h. Tip over from unsupported outriggers or unlevelled operation.
- i. Operator being ejected by limbs under tension.

H. OFF ROAD EQUIPMENT, TRACTORS, SKIDDERS, ETC.

1. All vehicles used off road, and specifically tractors and bulldozers, shall be equipped to protect the operator from whipping branches, falling trees and branches, and debris which may be kicked up.
2. All tractors, tracked vehicles and bulldozers shall be equipped with approved rollover protection.
3. Vehicles shall be equipped with seat belts, and they shall be used.
4. Vehicles shall be equipped with first aid kits and portable fire extinguishers, and inspected daily.
5. Vehicles shall not be operated cross-hill on grades that exceed the manufacturer's specifications. Careful consideration shall be given to the steepness of grade, character and condition of the soil and presence of roots, stumps, rocks, etc. that could contribute to or precipitate a rollover.
6. Vehicles shall be operated in a controlled, professional manner. Excessive speed, excessively fast and sharp turns (especially when traveling downhill) and any other form of reckless operation is specifically prohibited.
7. Complete a Job Briefing before each operation.

8. Principal Hazards

- a. Rollover.
- b. Fire.

I. ALL TERRAIN VEHICLES (ATV)

1. Only the operator and necessary equipment shall be transported on an ATV unit.
2. While operating the ATV, the operator shall wear approved head {Dept. of Transportation (DOT) or Snell Memorial Foundation (SMF)} and eye protection (ANSI Z87).
3. The ATV shall be equipped with an approved fire extinguisher and first aid kit.
4. The ATV shall be operated at a safe and controlled speed that is appropriate for the specific terrain or conditions. Excessive speed, excessively fast and sharp turns (especially when traveling downhill) and any other form of reckless operation is specifically prohibited.
5. The ATV shall not be operated on steep grades or where the unit has the potential to rollover. Caution shall be used in regards to the steepness of terrain, condition of terrain, soil, stumps, roots, rocks, water etc...
6. The ATV shall never be used to pull overhangs or lower limbs from trees or remove trees.
7. The ATV shall not be operated on hard surface roads or highways.
8. Never allow an unauthorized person to operate the ATV.

9. Principle Hazards

- a. ATV Rollover.
- b. Fire.
- c. ATV equipment failure caused by improper inspection and improper tire pressure.

10. Care and Maintenance

- a. The ATV shall be thoroughly inspected and maintained in strict accordance with inspection requirements and manuals issued by the Company and the manufacturer before use.
- b. The operator shall give special attention to the following:
 - (1) Weight and towing capacity shall never be exceeded (refer to the manufacturer recommendations).
 - (2) The proper air pressure shall be maintained and the type and size of the tires specified in the owner's manual shall be utilized.
- c. The ATV shall not be modified without approval from the Company and the ATV manufacturer.
- d. No maintenance operations shall be performed while the engine is running.

J. CRANES & BOOMS**1. Operation**

- a. The maximum lift shall never exceed manufacturer's specifications and shall be operated by qualified operator meeting applicable standards for crane operations.
- b. Operator and climber shall use approved visual and audible signals before beginning any work. The standard hand signal poster shall be posted for reference on the equipment.
- c. The climber shall not be raised or lowered between wires, cables or conductors.
- d. Operator shall wear a hard hat and eye protection during all crane operations.
- e. Crew members shall not be allowed under boom operation unless required to do so by specific job procedure.
- f. All unauthorized persons shall be kept clear of the operation. Barriers shall be erected as necessary.
- g. Boom shall be worked over side or to rear of the truck- never over the front of the truck or forward of the beam (90° to the side) position.
- h. Boom shall be worked as near to vertical position as possible. Position drop line as near to directly over the balance point of piece being removed as possible.
- i. Heavy loads should not be lifted or lowered with boom lower than 45 degrees.
- j. Crane shall *never* be worked without first properly setting all outriggers. Planks or equivalent shall *always* be used under outrigger feet.
- k. Every step necessary shall be taken to insure adequate traction for outriggers.
- l. Boom shall be kept at least 10 feet from conductors at all times. If this is not possible, discuss in advance with General Foreperson and/or Utility, so special arrangements can be made.

Truck shall be made level before beginning work.

When boom is used to aid in putting outriggers out, a flagger shall be assigned to watch for obstructions and passing traffic.

- o. Slack shall not be allowed to get in drop line, because to do so may cause the line to become fouled in drum operating gears. Special care shall be taken not to run drop line out when pill weight is off drop line.
- p. Crane shall be operated within limits set by manufacturer.
- q. Sling shall be equal in strength to drop line.
- r. Truck deck shall be kept clean, free of debris, and obstructions at all times.
- s. Special consideration shall be given to the possibility of dead branches breaking when they are being handled, or breaking out of a tree when the tree is being worked on or in.
- t. Branches shall not be lowered over truck.
- u. Knots shall not be used to secure the drop line to the pin or to form a sling. Only an eye splice on the pin and a short splice on the sling shall be used.
- v. Power saws shall be secured with an approved line when used in the air.
- w. Boom shall never be telescoped when a load is on the hook.
- x. Climbers shall be hoisted only when tied in properly to a designated anchor point on the boom or load line with a rope and saddle.
- y. The boom shall never be telescoped when a load is on the pill.

2. Principal Hazards

- a. Equipment failure caused by inadequate or improper inspection and maintenance procedures.
- b. Equipment failure / Overloading.
- c. Truck rollover.
- d. Electric contact.
- e. Failing debris.
- f. Highway incident.
- g. Unqualified operator

3. Care and Maintenance

- a. Equipment shall be inspected and maintained in strict accordance with inspection requirements and manuals issued by the Company and the manufacturer.
- b. Special attention shall be given to the following:
 - (1) Wire rope or natural or synthetic rope with wire cores shall *never* be used as drop line or sling. 5/8" Dacron is the standard drop line.
 - (2) Daily inspection shall be made of all ropes, slings, cables, gears, screws, shafts, hooks, snaps, welds, body mounting bolts, cotter pins, batteries, etc.
 - (3) Report immediately any unusual noises or operating characteristics.
- c. Telephone for approval from the Equipment Dept. prior to making any field repairs.
- d. Cranes and booms shall be inspected each week and the results reported per Company requirements.
- e. Equipment shall always carry an approved fire extinguisher and first aid kit.

K. STUMP GRINDERS

Our aim is to provide the best quality service as safely as we can. We often need to use new types of equipment to reach that goal. Stump grinder use, once a specialized job, is becoming a daily routine. This Special Bulletin is intended to help you operate and transport stump grinders as safely as possible.

Any employee operating a stump-grinding machine is responsible for meeting the following requirements:

1. ***Only trained operators shall operate a stump grinder.***
2. Every new operator shall be directly supervised by a trained operator until that operator certifies in writing that the new operator has been trained.
3. Before operating this machine ensures that the Operator's Manual and Maintenance Manual are on-site with the machine.
4. Ensure that all manufacturers' safety and instructional decals are in place and legible.
5. Before operating any stump grinder, the operator shall read all manufacturers' guidelines and procedures.
6. The Foreperson is responsible for ensuring that proper maintenance has been performed according to the manufacturers' specifications.
7. Before daily operations begin, the operator shall inspect the unit and ensure that all fluids (oil, hydraulic fluid, radiator fluid, etc.) are at the proper levels. The operator must inspect all cutting teeth for wear and tightness and confirm that no teeth are missing. The operator must inspect critical welds for cracks, and ensure that mounting bolts are tight. The operator must not operate the machine if any of these terms are found defective.
8. The operator shall wear proper personal protective equipment (PPE), including hard hat, safety glasses, hearing protection and chaps. If the machine does not have a protective reflector skirt to protect the operator, a face shield shall be worn.
9. The operator shall operate the machine from behind the machine or from the side of the machine. The operator shall never operate the machine while in front of the protective deflector skirt.
10. The operator shall ensure that any other employees are at least 25ft (7.62m) away from the machine while it is in operation. The operator shall ensure that any non-employees are at least 50 ft (15.24m) away from the machine while it is in operation.
11. Unless he/she has written approval from the manufacturer and from the Company, the operator shall not operate the machine if any manufacturer's safety devices are missing, broken, damaged, or altered so that they are not working as designed by the manufacturer.
12. The operator shall ensure that the key to the machine is never left in the ignition while the machine is unattended.

Proper Procedures for Towing a Stump Grinding Machine:

1. At the end of a job, be sure to clean all debris and chips from the machine before moving the machine to the next job.
2. Before towing the machine, perform a visual inspection as follows:
 - a. Look for any fluid leaks. Correct any problems.
 - b. Check tires for proper air pressure, proper load range, and any signs of excessive tread wear. If you see any cuts in the sidewalls or if you see tread less than 2/32 in. (1.6mm) in depth, the unit shall not be towed.
 - c. Check the tow vehicle hitch assembly for excessive wear. If the tow hitch shows signs of excessive wear, the machine shall not be towed.
 - d. Ensure that tow chains are crossed and attached to the unit that is towing the machine.
 - e. If the unit is equipped with lights and/or a breakaway switch, ensure that they are attached and working properly before the machine is towed.
 - f. Confirm that the towing vehicle has current and valid registration and inspection stickers.
3. Before transporting a machine on a trailer, perform a visual inspection of the trailer as follows:
 - a. Look for and fluid leaks. Correct any problems.
 - b. Check trailer tires for proper air pressure, proper load range, and any signs of excessive tread wear. If you see any cuts in the sidewalls or if you see tread less than 2/32 in. (1.6mm) in depth, the unit shall not be towed.
 - c. Ensure that the machine has been chained down securely with at least two chains and with two binders (pulling in opposite directions). Please refer to the Load Securement Regulations for your area.
 - d. Ensure that the combined weight of the stump grinder and the trailer it is being towed on does not exceed 10,000 lb (4,536 kg). If the combined weight is more than 10,000 lb, confirm that the driver transporting the machine has a valid Class A Commercial Driver's License (CDL) and a current medical examiner's card.
 - e. Confirm that the towing vehicle (combination) has current and valid registration and inspection stickers.

Following these simple procedures will allow us not only to satisfy our customers, but also to achieve our ultimate goal of employee safety. Work smart, work hard, but most of all work safe!

VIII. PERSONAL CONDUCT**A. APPEARANCE AND DRESS**

1. Loose fitting clothing and dangling jewelry shall not be worn on the job during working hours. Clothing shall be appropriate for work being performed
2. No cut-off or rolled up sleeves permitted.

B. COURTESY

1. Employees shall use language and conduct that is courteous and considerate at all times on the job.

C. HORSEPLAY

1. Horseplay shall not be permitted at anytime on the job.

D. ALCOHOLIC BEVERAGES AND DRUGS. Any person who is under the influence of alcohol or drugs which affect the mind or physical coordination, presents a clear hazard to both themselves and their fellow workers. Therefore, all company operations shall be governed by the following:

1. Alcoholic beverages or drugs shall not be possessed on the job, in company equipment or on company property.
2. Alcoholic beverages or drugs shall not be used at any time on the job or before work.
3. No employee shall be allowed to work, or be on the job, or remain in company equipment or on company property that is under the influence of alcohol or drugs.

E. FIREARMS

1. Firearms or other weapons shall not be transported to, or allowed on the job, or in/on the equipment.

F. FIGHTING

1. Fighting or any other type of violence at work, while traveling to or from the job site, or at the starting point shall not be permitted and violations will result in immediate disciplinary action.

SAFETY..... LIVE BY IT!

WILDFIRE

Wildfires have enormous potential for destruction. The risk has increased as development spreads into fire-prone areas. Under the right conditions, fires are possible in any area. For your safety, and for the safety of others living nearby, it is imperative that neither you nor your operations are the cause of wildfires.



Never smoke in fire-prone areas!

The risk of fire depends on local conditions, including weather, available fuel, and topography. For example, dry and windy conditions create a higher risk. Steep slopes can enhance the spread of fire, and narrow valleys or canyons can increase the effect of wind.

Drought conditions can create extreme fire danger even in areas where fires are uncommon. Long-term drought leads to more dead and dying trees, which adds to the available fuel load.

Sparks and embers caused by trees contacting power lines, or sparks or flame caused by malfunctioning electrical equipment on utility poles, can ignite wildfires.

FOREPERSON'S WILDFIRE SUPPRESSION AND PREVENTION MANUAL

A separate and complete "wildfire manual" is used in addition to this information. Get a copy by writing or calling the Risk Management Department at the Home Office. Study the information carefully. The manual is available in both English and Spanish languages.

FIRE PREVENTION

Three things are necessary to ignite and sustain a fire: **heat**, **fuel** and **oxygen**. Fires can be prevented or controlled by limiting any one or more of these essential components. For example, rakes and other tools can be used to separate fire from fuel. Covering fire and embers with soil deprives the fire of oxygen. Heat can ignite or sustain a fire when fuel and oxygen are available. Sources of heat can include lightning, matches, cigarettes, exhaust systems, and sparks from any source.



Fire Triangle

WHAT YOU CAN DO TO PREVENT FIRES

1. *Follow the rules!* Make sure that your actions do not cause any incidental contact between trees and power lines, and avoid situations that could cause a fire to start.
2. *Do not smoke in fire-prone areas.* If you must smoke, smoke only in a cleared area. Never flick ashes or butts onto dry forest floors or grass. Take cigarette butts with you and dispose of them properly.
3. *Do not park vehicles over dry grass or other flammable materials.* The exhaust systems are hot enough to ignite dry fuels. The same applies to chain saws and other gas-powered tools and equipment.
4. *Keep your equipment in good operating condition.* Make sure that spark arrestors, mufflers and exhaust systems are clean and undamaged.
5. *Be aware of conditions.* On high fire danger days, be especially vigilant! Officials may restrict certain activities, including our operations, when conditions are extreme.

COMMUNICATION

In the event of a fire it is essential to be able to provide critical information to emergency response personnel, and to your supervisor. Before operating in fire-prone areas, know whether you have reliable cell phone or radio coverage. If not, take note of the nearest public phone, or note the nearest area where cell phone and radio coverage is reliable. Make sure that you know who to call in the event of a fire. "911" emergency assistance is not available in all areas.

IF A FIRE STARTS

If a fire starts, **PUT IT OUT**, control it, or get to a safe place if necessary!

Call emergency personnel as soon as possible. Stay calm, and provide critical information. At minimum, they will need:

Your location - Know the name or number of the nearest road, and other important information

Fire information - Where the fire is, its size, what it is burning, the direction it is moving, local topography, what is at risk (i.e. houses, structures, power lines, bridges, etc.)

Hazards - Propane tanks, power lines, hazardous materials, or other potential dangers

Communication - Your call back number

If a fire starts, make every effort to put it out or prevent it from spreading. When a fire is small, you have a better chance of keeping it under control.

DO NOT COMPROMISE YOUR SAFETY! STAY TOGETHER AND WORK AS A TEAM!

If the fire is taller than you, has jumped to the tree crowns, or otherwise cannot be safely controlled, STOP FIREFIGHTING EFFORTS AND GET TO A SAFE PLACE! As stated before, any fire must be immediately reported to local authorities, and to your supervisor.

Personnel should stay on site until emergency response teams take control.

CONTROLLING A FIRE

Remember the Fire Triangle – **oxygen, fuel and heat**. Removing any of these will extinguish the fire.

⌚ Water is very effective in extinguishing fires, since water removes the heat component.

⌚ Smothering a fire with dirt removes the oxygen source and is useful in extinguishing small wildfires.

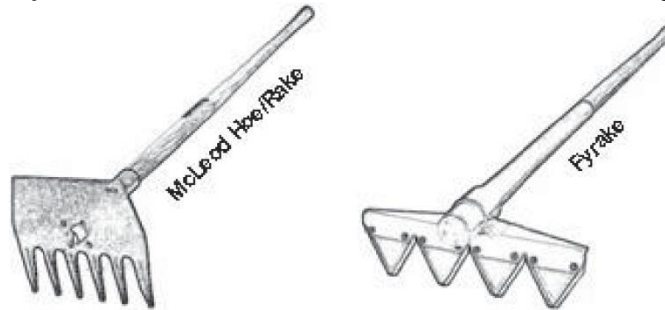
- ³/₄ Removing the fuel source (grass/leaves/pine needles and other dead vegetation) down to mineral soil is an effective way to help prevent the spread of active wildfire.

USING FIREFIGHTING TOOLS

Crews working in fire-prone areas will be issued tools to use in the event of a wildfire. These tools include:

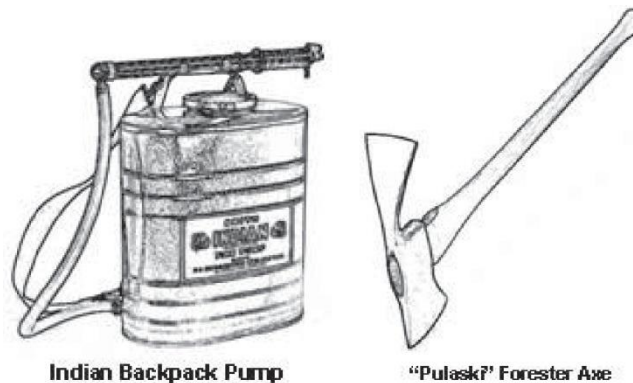
Round-pointed Shovel - used to cut through surface litter and duff to remove fuel ahead of a wildfire, or to extinguish the fire by throwing loose soil and sand at the base of the fire.

MacLeod Rake or Fry rake – used to clear matted litter, duff, and dead vegetation.



Backpack Pump or “Type A” Extinguishers – use sparingly, conserving water or propellant to maximize their usefulness.

Fire Axe - used to both dig soil and chop wood.



Precautionary Measures

Different tables establish work restriction and fire precautions that we must observe at each activity level. Note that tables may vary in different forest districts/regions.

Example

| PAL | Project Activity Level* |
|-----|--|
| A | Minimum Restriction |
| B | Furnish Fire Patrol if required in contract. |
| C | After 1:00 PM no cutting dead trees, |
| D | Shut Down. All operations prohibited except loading trucks in landings, servicing equipment in landing and dust abatement. |
| E | Same as E except site-specific conditions may warrant a variance permitting some o |

*** The information shown for activity levels is general. Supervisors should refer to their contract for more detailed information on what activities are allowed or prohibited for each activity**

Important safe practices to remember when working in High Fire Hazard Areas

- a. Before starting work, do your pre-job safety briefing. Always pay attention to your surroundings of your work area. Look around for any potential fire hazards. Dry grass, refuse & debris, wood chips, dry branches, fuel build up on rights-of-ways, and dried fir or pine needles which can lead to potential flames.
- b. Remember that it is the policy of Pacific Coast Tree Experts that no camp stoves are allowed on company equipment and are not allowed to be used at any time no matter where you are working. This policy also applies to any crews working in non fire areas also.
- c. Remember, without taking proper steps to ensure fire safety, the equipment you use while working has the potential to ignite a fire, before and after you have left the work zone.

It is MANDATORY to have all required fire tools in good working order and readily available to you while working in either on-road or off-road conditions.

As well as having the required fire tools, it is VERY important to have a fire response plan in case a fire starts. Be sure that you have communication with the outside in order to immediately contact your supervisor as well as emergency services.

Make sure that the General Foreman goes over the work that will be done in your location. Make sure to address any hazards or concerns at that time prior to commencing work.

Once work has been finished, do a quick check of the immediate area to ensure that there are no signs of any smoldering/small fires, before leaving.

Prior to parking a truck and chipper in any grassy area, Make sure you clear out any dry grass/debris in a 40 x 20 area so you can then park your equipment safely. Carbons that build up on catalytic converters from poorly combusted fuel will come loose and at 500 -700 degrees will easily ignite any combustible fuels or materials.

NEVER, set a chainsaw down in a grassy area when the chainsaw is hot. A spot must first be cleared out of any combustible materials and then it can be used as a refueling area for the chainsaw.

REMEMBER, smoking in High Fire Hazard Areas or on any Dept. of Forestry lands during fire season is dangerous and illegal under certain conditions as well as prohibited by company safety policy.

Always make sure that Fire Extinguishers and Fire Tools are in good working order at the beginning as well as the end of the work period.

The Safety of our employees is the NUMBER ONE PRIORITY in case of FIRE!

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SECTION 11**HOW TO REPORT INCIDENTS** *(Continued)***EMPLOYEE REPORT OF INJURY OR ILLNESS**

(This report must be filled out by the injured employee)

Name: _____

Position: _____ GF Name: _____

Normal Work Hours: Am ☐ Pm. ☐ Circle NON-WORKING Days: M T W TH F SA SUDate & Time of injury: ☐ Am. ☐ Pm. Time you began working on date of injury ☐ A.m. ☐ P.m.

Location where injury occurred: _____

Date & Time injury first reported: ☐ Am. ☐ Pm Injury reported to: _____

Name of Witnesses: _____

What were you doing just before the incident occurred? Describe the activity, as well as the tools, equipment or material you were using. Please be specific.

What happened? Tell us how the injury occurred.

What was the injury or illness? Tell us the part of the body that was affected and how it was affected; be more specific that "hurt", "pain", or "sore". Example "sprained ankle", "strained back", etc.

What object or substance directly harmed you?

Examples: "concrete floor"; "If this question does not apply to the incident, leave it blank."

When did you first get medical attention? Date: _____ Time: Am ☐ Pm ☐

Clinic or hospital name, location: _____

Could this injury have been prevented? ☐ Yes ☐ No If yes, Please explain: _____

Employee Signature: _____ Date: _____

WITNESS STATEMENT

(To be completed by any employee that witnessed the injury/incident)

Name of Witness: _____

Employee Name: _____ Date of Incident _____

Were you in the area where the incident happened? ☐ Yes ☐ NODid you see the incident happen? ☐ Yes ☐ NODid the incident appear suspicious? ☐ Yes ☐ NO

How did the incident occur? (Please give detailed description of incident, what you saw or what you were told, including equipment/materials employee was using, specific activity employee was performing, and the sequence of events.)

What part(s) of the body was injured? _____

Was the employee using a tool or equipment when the incident happened? ☐ Yes ☐ NO

If so, explain:

Witness Signature_____
Date

Left blank to insert incident report forms

Your reporting responsibility

As Foreperson you are not permitted to report claims to our Claim Administrators.

However, you are our first and best source of information about the accident. The information you gather for your General Foreperson about how an accident happened is what they will use to report the incident.

1. Notify your General Foreperson immediately. They will call the Safety and Risk Management Department who will contact the insurance company.
2. Help your General Foreperson gather as much of the information that is listed on the Auto Liability, General Liability and Workers' Comp. lists in 11-6 and 11-7.
3. Even though you may not have knowledge of an accident, a report must be completed whenever a claim is made against us. Be sure to advise your General Foreperson if you do not have knowledge of the accident or damage.
4. The driver of a vehicle involved in an accident is responsible for making any other report of the accident required by the motor vehicle laws of that state.

IMPORTANT SERIOUS INCIDENTS

Serious Bodily Injury or Extensive Property Damage **MUST** be reported **IMMEDIATELY** to your General Foreperson who will notify:

1. Your Supervisor/Manager
2. The Safety and Risk Management Department in Canoga Park.

If the FATALITY, serious injury or extensive property damage occurs after normal working hours or when the business offices are closed, your manager will know how to contact the Safety & Risk Management Dept.

GENERAL LIABILITY INCIDENT REPORT

A General Liability Accident includes all non-automobile accidents which result in bodily injury to people not employed by The Company, or result in damage to the property of others.

VEHICLE ACCIDENT REPORTING

A vehicle incident includes all Auto and Truck Incidents that involve the following:

1. Injury to a person.
2. Damage to the property of others (including Autos).
3. Damage to company vehicles.
4. Damage to, or caused by, a chipper or trailer when attached to a company vehicle.
5. Theft of, or vandalism to, a company owned car, truck or piece of equipment.
6. If the Chipper or Trailer is attached to a vehicle, it is considered part of the towing vehicle and should be reported on the Vehicle Incident Report Form. Refer to 11-8.
7. If at the time of the incident the Chipper or Trailer is not attached to any vehicle it must be reported as a General Liability Incident. Incidents involving equipment not licensed for high way use are also reported on the General Liability form. Refer to 11-8.

YOUR REPORTING RESPONSIBILITY

1. Damage to company-owned chippers, tractors and all unlicensed equipment, must be reported to your General Foreperson as soon as possible. The General Foreperson must report this damage to The Safety and Risk Management Department immediately.
2. A written report form INS 101 must be completed for each incident and faxed to the Safety and Risk Management Manager.
3. **All Report Form Questions Must Be Answered.** Complete, date and sign the report. Be sure to include your address.
4. Report these incidents to the Police and send a copy of the Police report to the Safety and Risk Management Manager. If the police report is not immediately available, mail it later to the Safety & Risk Management Department in Canoga Park.
5. The theft of, or damage to, a company-owned car or truck should be reported on the INS 101 form. Refer to 11-8.
6. The theft of, or any damage to, (not involving another vehicle) a car or truck, leased or rented, but not owned by the company, should be immediately reported to the actual owner. They will advise you of any action to be taken.

SECTION 11

HOW TO REPORT INCIDENTS *(Continued)*

You can help your general Foreperson report an incident by gathering the following information:

General Liability List

- ☐ Claimant(s) Name, Address, Telephone Number, and Insurance Information;
- ☐ Property Owner(s) Name, Address, Telephone Number, and Insurance Information — if different from Claimant;
- ☐ Company Contact Name (should be the General Foreperson or the person who should be assisting the adjuster in the completion of the investigation);
- ☐ Date and Time of Incident;
- ☐ Location of Incident;
- ☐ Description of Incident;
- ☐ Property Damage Description;
- ☐ Witnesses (Names, Addresses, and Telephone Numbers (this includes crew members, who were witnesses to the incident, as well as any outside parties who may be called upon as witnesses to this incident);
- ☐ Injured People (Names, Addresses, and Telephone Numbers, if possible);
- ☐ Any Fatalities;
- ☐ Medical Attention Received and To What Extent (was anyone hospitalized or taken by ambulance);
- ☐ Name, Address, and Telephone Number of Doctor / Hospital;
- ☐ Any Environmental / Fuel Spills;
- ☐ Police Department Responding Report Number (If Applicable, State, Local, or County);
- ☐ Reported By (General Foreperson, Supervisor, or Manager);
- ☐ Phone Number (Give your contact numbers: telephone, mobile, cell phone, pager, etc.);
- ☐ Location Code (Company Number, Region Number, and Crew Number);
- ☐ Name of Foreperson, General Foreperson, and Region Manager;
- ☐ Was Safety Appliance or Regulation Provided;
- ☐ Was it in Use at the Time;
- ☐ Was Incident Caused by Injured Employee's Failure to Use or Observe Safety Appliance or Regulation.

Auto Liability List

- ☐ Claimant(s) Name, Address, Telephone Number, and Insurance Information;
- ☐ Company Driver's Name, Address, Telephone Number, and Driver's License Number;
- ☐ Date and Time of Incident;
- ☐ Location of Incident;
- ☐ Description of Incident;
- ☐ Witnesses or Passengers (Names, Addresses, and Telephone Numbers);
- ☐ Injured People (Names, Addresses, and Telephone Numbers, if possible);
- ☐ Any Fatalities;
- ☐ Medical Attention Received and To What Extent (was anyone hospitalized or taken by ambulance);
- ☐ Name, Address, and Telephone Number of Doctor / Hospital;

- ☐ Description of Vehicle(s) Involved (include: year, make, model, and VIN Number);
- ☐ Were Any Vehicles Towed;
- ☐ Any Citations Issued (If yes, describe);
- ☐ Any Environmental / Fuel Spills;
- ☐ Police Department Responding Report Number (If Applicable, State, Local, or County);
- ☐ Property Damage Information (If Applicable);
- ☐ Reported By (General Foreperson, Supervisor, or Manager);
- ☐ Phone Number (Give your contact numbers: telephone, mobile, cell phone, pager, etc.);
- ☐ Location Code (Company Number, Region Number, and Crew Number);
- ☐ Name of Foreperson, General Foreperson, and Region Manager;
- ☐ Was Safety Appliance or Regulation Provided;
- ☐ Was it in Use at the Time;
- ☐ Was Incident Caused by Injured Employee's Failure to Use or Observe Safety Appliance or Regulation.

NOTE: Auto Liability claims, in which liability rests solely on the other driver and do not involve injuries, are considered to be Subrogation claims. These Subrogation claims are NOT to be called into the insurance carrier. They will be handled by filling out an INS-101 Motor Vehicle and General Liability Incident Report, which should then be sent into the Risk Management Department with any and all information necessary to obtain recovery for your Region (i.e. police report, estimates for repair to our vehicle, photos of our vehicle, etc.).
Do not allow our vehicle to be kept at a shop that charges storage. Move it, even if you have to pay another tow bill, to a storage free location.

Workers' Compensation List

- ☐ Injured Employee's Name, Address, and Telephone Number;
- ☐ Social Security Number and Date of Birth;
- ☐ Date and Time of Injury / Illness;
- ☐ Nature of Injury / Illness and Body Part Injured;
- ☐ Location of Incident;
- ☐ Description of Incident;
- ☐ Witnesses (Name, Address, and Telephone Number);
- ☐ Date and Type of Medical Attention Received;
- ☐ Name, Address, and Telephone Number of Doctor / Hospital;
- ☐ Reported By (General Foreperson, Supervisor, or Manager);
- ☐ Phone Number (Give your contact numbers: telephone, mobile, cell phone, pager, etc.);
- ☐ Location Code (Company Number, Region Number, and Crew Number);
- ☐ Name of Foreperson, General Foreperson, and Region Manager;
- ☐ Date of Hire;
- ☐ Number of Hours Worked Per Day;
- ☐ Hourly Rate of Pay;
- ☐ Date Employee Began Losing Time From Work;
- ☐ Date Employee Returned to Work;
- ☐ Was Safety Appliance or Regulation Provided;
- ☐ Was it in Use at the Time;
- ☐ Was Incident Caused by Injured Employee's Failure to Use or Observe Safety Appliance or Regulation.

Motor Vehicle and General Liability Incident Report

| | | |
|---|---|--|
| <input type="checkbox"/> Auto Incident <input type="checkbox"/> Property Damage Incident <input type="checkbox"/> Fire, Theft, Damaged/ Vandalized Equipment | Company: _____ <div style="border: 1px solid black; width: 150px; height: 20px; margin-top: 5px;"></div> | CREW NUMBER <div style="border: 1px solid black; width: 150px; height: 20px; margin-top: 5px;"></div> |
|---|---|--|

IMPORTANT: Answer every question or write "UNKNOWN."

| | | | | | | | | |
|---|---|--|---|--|-----------------------------|--------------------------|---------------|-------|
| INCIDENT INFO | DATE OF INCIDENT: | TIME: <div style="display: inline-block; width: 20px; text-align: center;">A.M. P.M.</div> | INCIDENT LOCATION: | CITY: | STATE: | POLICE TO WHOM REPORTED: | | |
| | DESCRIPTION OF INCIDENT OR LOSS: <i>(Use reverse side if necessary)</i> | | | | | | | |
| | | | | | | | | |
| EQUIPMENT INFORMATION DIAGRAM COMPANY EQUIPMENT | | | | | | | | |
| | YEAR: | MAKE: | MODEL: | VIN NUMBER: <i>(Vehicle Identification Number)</i> | PLATE NUMBER AND STATE: | | | |
| | OUR DRIVER NAME: | | AGE: | ADDRESS: | PHONE NUMBER: | | | |
| | RELATION TO INSURED: <i>(Employee, Family, etc.)</i> | | PURPOSE OF VEHICLE USE AT TIME OF INCIDENT: | | | | | |
| | DESCRIBE DAMAGE AND/OR INCIDENT: | | | | | | | |
| | REPAIR ESTIMATE: \$ | WHERE CAN DAMAGED VEHICLE BE SEEN AND WHEN? | | | EQUIPMENT NUMBER: | | | |
| | OWNER: | | | ADDRESS: | PHONE NUMBER: | | | |
| | OTHER DRIVER: <input type="checkbox"/> SAME AS OWNER | | | ADDRESS: | PHONE NUMBER: | | | |
| | DESCRIBE PROPERTY: <i>(If Auto, Make, Year, & Plate Number)</i> | | | WHERE CAN VEHICLE BE SEEN? | | | | |
| | REPAIR ESTIMATE: \$ | OTHER VEHICLE OR PROPERTY INSURED? <input type="radio"/> YES <input type="radio"/> NO | | COMPANY OR AGENCY NAME: | | POLICY NUMBER: | | |
| DESCRIBE DAMAGE: | | | | | | | | |
| PROPERTY DAMAGE | | | | | | INSURED VEHICLE | OTHER VEHICLE | OTHER |
| | | | | | | | | |
| WITNESSES | NAME(S): | | ADDRESS: | PHONE NUMBER: | | | | |
| | | | | PHONE NUMBER: | | | | |
| INJURIES | NAME(S): | | ADDRESS: | PHONE NUMBER: | EXTENT OF INJURIES, IF ANY: | | AGE | |
| | | | | | | | | |
| REMARKS: | | | | | | | | |
| | | | | | | | | |
| PERSON COMPLETING REPORT & TITLE: _____ DIV/REG - MANAGER/VP: _____ | | | | | | | | |
| DATE OF THIS REPORT: _____ SIGNED BY: _____ TITLE: _____ PHONE: _____ | | | | | | | | |

Motor Vehicle and General Liability Incident Report

| | | |
|---|---|--|
| <input type="checkbox"/> Auto Incident <input type="checkbox"/> Property Damage Incident <input type="checkbox"/> Fire, Theft, Damaged/ Vandalized Equipment | Company: _____ <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> | CREW NUMBER <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> |
|---|---|--|

IMPORTANT: Answer every question or write "UNKNOWN."

| | | | | | | |
|---|---|---|---|---|-------------------------------|--|
| INCIDENT INFO | DATE OF INCIDENT: _____ | TIME: _____ A.M. P.M. | INCIDENT LOCATION: _____ | CITY: _____ | STATE: _____ | POLICE TO WHOM REPORTED: _____ |
| | DESCRIPTION OF INCIDENT OR LOSS: (Use reverse side if necessary) | | | | | |
| | | | | | | |
| EQUIPMENT INFORMATION | <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> YOUR CAR </div> </div> | | | | | |
| | YEAR: _____ | MAKE: _____ | MODEL: _____ | VIN NUMBER: (Vehicle Identification Number) _____ | PLATE NUMBER AND STATE: _____ | |
| | OUR DRIVER NAME: _____ | | AGE: _____ | ADDRESS: _____ | PHONE NUMBER: _____ | |
| | RELATION TO INSURED: (Employee, Family, etc.) _____ | | PURPOSE OF VEHICLE USE AT TIME OF INCIDENT: _____ | | | |
| | DESCRIBE DAMAGE AND/OR INCIDENT: _____ | | | | | |
| | REPAIR ESTIMATE: \$ _____ | WHERE CAN DAMAGED VEHICLE BE SEEN AND WHEN? _____ | | | EQUIPMENT NUMBER: _____ | |
| | OWNER: _____ | | | ADDRESS: _____ | PHONE NUMBER: _____ | |
| | OTHER DRIVER: () SAME AS OWNER | | | ADDRESS: _____ | PHONE NUMBER: _____ | |
| | DESCRIBE PROPERTY: (If Auto, Make, Year, & Plate Number) _____ | | | WHERE CAN VEHICLE BE SEEN? _____ | | |
| | REPAIR ESTIMATE: \$ _____ | OTHER VEHICLE OR PROPERTY INSURED? <input type="radio"/> YES <input type="radio"/> NO | | COMPANY OR AGENCY NAME: _____ | | POLICY NUMBER: _____ |
| DESCRIBE DAMAGE: _____ | | | | | | |
| PROPERTY DAMAGE | | | | | | |
| | | | | | | |
| | | | | | | |
| WITNESSES | NAME(S): _____ | | | ADDRESS: _____ | PHONE NUMBER: _____ | INSURED VEHICLE <input type="checkbox"/> |
| | NAME(S): _____ | | | ADDRESS: _____ | PHONE NUMBER: _____ | OTHER VEHICLE <input type="checkbox"/> |
| INJURIES | NAME(S): _____ | | | ADDRESS: _____ | PHONE NUMBER: _____ | EXTENT OF INJURIES, IF ANY: _____ |
| | | | | | | AGE: _____ |
| | | | | | | |
| REMARKS: _____ | | | | | | |
| | | | | | | |
| PERSON COMPLETING REPORT & TITLE: _____ DIV/REG - MANAGER/VP: _____ | | | | | | |
| DATE OF THIS REPORT: _____ SIGNED BY: _____ TITLE: _____ PHONE: _____ | | | | | | |

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Equipment on the job must meet certain requirements

1. **Job Efficiency-** The equipment provided must be in good mechanical condition.
2. **Customer's Needs** - The type of truck and other equipment provided must meet the requirements of the customer. Breakdown-free operation and good appearance are especially important
3. **Company Interest-** The equipment must be operated safely and efficiently to protect the company's investment and prevent possible injuries. Preventive maintenance and care are essential to avoid unnecessary expenses and breakdowns. You are responsible for meeting these requirements in many ways.

You must also know when to get help from your General Foreperson or the Equipment Department. You are responsible for having the correct maintenance and operating manuals for each piece of equipment so that proper procedures can be followed.

DRIVER'S LICENSE POLICY AND LEGAL REQUIREMENTS

A Crew Foreperson must be an authorized driver and qualify by company standards to operate the company vehicles under their control. You must see that all equipment is properly licensed and has a current D.O.T. or state inspection as required. If there is any question, you should contact your General Foreperson well before any expiration dates, so that the crew will not be held up or possibly fined because of illegal equipment.

You must see that all drivers are properly licensed for the state where they are working. Check federal and state requirements, for example, if required, CDL, Medical Card, or total combined weight for the vehicle you are driving.

You must see that legal requirements are maintained, for example, tail lights, turn signals, brake lights and 4 - way flashers must all be working. When required, flares, flags, fire extinguishers or any other devices required by D.O.T. regulations must be in their proper places.

SERVICE

You are responsible for proper servicing of the equipment. Gas, oil, water and tires shall be checked DAILY before operation. Lubrication and other recommended services must be arranged monthly or whenever recommended. Each Spring and Fall seasonal service and checks should be arranged. Follow the manufacturer's recommendations which are found in the service manual, operator s manuals and on our Lubrication and Maintenance Schedule for the equipment involved. The Fall service, including anti-freeze protection, must be completed well before the first frost date for the area.

REPAIR AND PARTS

Systematic tightening of bolts, screws and similar items can avoid breakdown and larger expenses. Minor repairs and checks should be done promptly by the Foreperson, or the driver.

When repairs are necessary you should consult with your General Foreperson. This is because the equipment may be scheduled for change or replacement. It will also make sure we get proper discounts, the right parts and sensible repairs. Relief equipment may be needed to have the proper job done. There may be warranty involved, which is one reason to use an authorized dealer wherever possible.

Orders for parts should also be done in consultation with your General Foreperson. For example, with truck tires there might be either a better price through discounts, or recapping may be advisable. It is also important to get the proper parts -particularly on Aerial Devices. On such parts orders, be sure to include part numbers, lift serial number of unit involved as well as equipment number. Too much information is better than too little to make sure you get the right parts. NOTE: Only factory approved replacement parts can be used on any aerial device.

On larger bills, it is important to include information such as odometer reading, license number and Fleet equipment number. A Purchase Order Shall be requested from the Canoga Park office before parts are purchases. The Canoga Park office records on equipment are kept according to equipment number, so be sure this number is on ALL reports, questions, bills, etc.

STORAGE

It is your responsibility to park equipment in a safe and convenient place. The truck shall be locked and is not to be used before or after regular working hours, except in a Storm Emergency. Ignition keys shall be removed from the truck, chipper engine, pony engine, etc., and kept in a safe place. Whenever possible, all tool bins, cab doors, etc., shall also be locked and burglar bars be in place to prevent theft and unauthorized use of the equipment.

APPEARANCE

Cleanliness is important to appearance. Good housekeeping, orderly tool storage, and wiping off or washing the equipment are important parts of keeping the appearance of your equipment looking good. Waxing, touch-up paint, or complete repainting can only be done after consulting with the Equipment Department in Canoga Park.

OPERATING AND MAINTENANCE MANUALS

Make sure you have the proper manuals for the specific equipment you are operating. Manuals for any type of equipment may be ordered through Pacific Coast Tree Experts' office in Canoga Park.

HAND-HELD FIRE EXTINGUISHES

REQUIREMENTS

1. The following vehicles are required to have a fire extinguisher with a 5 BC rating (or greater) or two (2) fire extinguishers with a 4 BC UL rating or greater.
 - Any pickup equipped with a trailer hitch.
 - Any truck with a Combined Gross Vehicle Weight rating of 10,001 pounds or more.
2. The following vehicles and equipment are required to have twenty (20) pound fire extinguishers.
 - Any pickup truck used as a support vehicle for tractors, skidders or large brush cutters etc. are required to have a twenty (20) pound fire extinguisher for aiding with the extinguishing of a fire on the above equipment. These vehicles are still required to comply with section 1 above which will require a total of 2 extinguishers per truck. (One is a smaller 5 BC or two 4 BC extinguishers and an additional 20 pound fire extinguisher.)
 - All (but not limited to) large brush cutters and off-road equipment are required to have two 20 pound fire extinguishers.

INSPECTION

The US Department of Transportation (DOT) requires a **daily inspection** of the fire extinguishers on the Post Trip Inspection Form to confirm they are secured and fully charged.

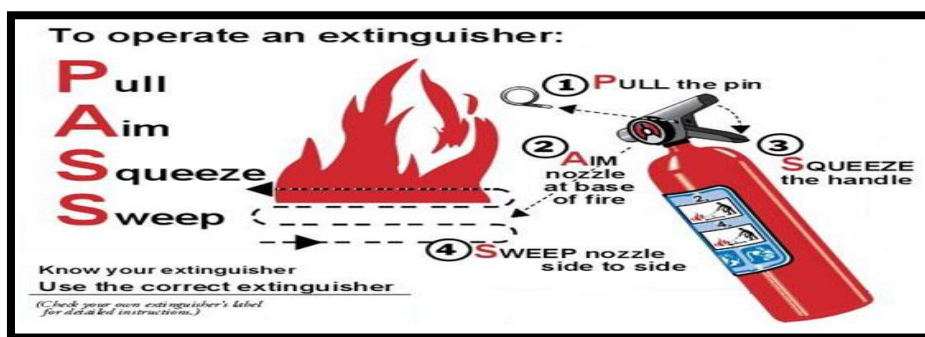
All fire extinguishers must also be **inspected monthly**, During the monthly inspection, check the following:

- Gauge: If the extinguisher is not fully charged (e.g., indicator in the green or 'Charged' area), replace it immediately.

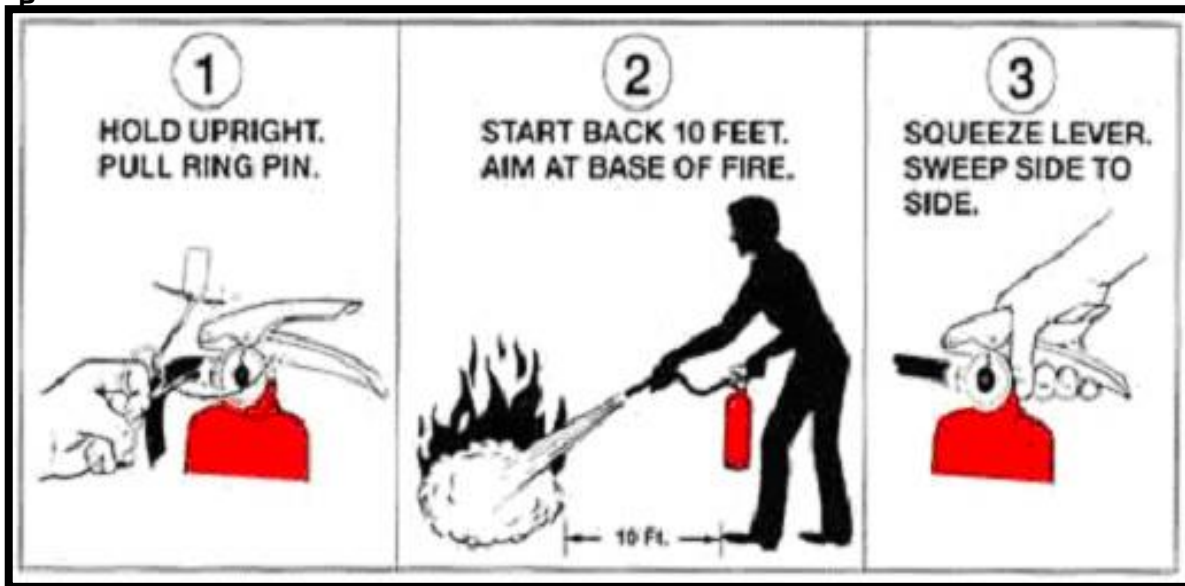
- **Hoses, connections, and seams:** Replace the unit if you see any punctures, cuts, tears, fraying, leaks, or other signs of damage or wear.
- **Pull-pins (e.g. Safety Latch):** Make sure they are in place and properly secured.
- **Mounting:** Ensure the unit is securely mounted and readily accessible for use. Read the labels on extinguishers and follow instructions from the manufacturer. Rechargeable extinguishers shall be serviced and inspected after every use. Disposable extinguishers shall be disposed of properly and replaced after use.

PROPER USE OF FIRE EXTINGUISHER

Remember **PASS: Pull, Aim, Squeeze, Sweep**



1. **P**



n

locks the operating lever. 2. **Aim** low. Point the extinguisher nozzle at the base of the fire.

3. **Squeeze** the lever above the handle. this discharges the extinguisher

4. **Sweep** from side to side. Moving carefully

SECTION 12**General Equipment****AERIAL DEVICE**

The purpose of the Aerial Device is to lift a person into position to work. It has a platform (bucket) in which the operator stands, raised by two booms. There is a power system to lift the booms and to operate saws, pruners, and other tools. It is all mounted on a truck which also carries the power unit, a dump body (if equipped) for chips, and other essentials,

The Aerial Device is fully insulated, and affords the operator the best protection that modern engineering can produce.

It has been designed to allow inspection and maintenance procedures to be carried out by the crew foreperson. The primary objective of this inspection and maintenance is to ensure the safety of your crew members and yourself. Do these thoroughly and conscientiously.

NOTE: Make sure you have the correct manuals, make, model, etc. for the piece(s) of equipment you are operating. Please refer to the maintenance and/or operating manuals if you have any questions regarding the proper maintenance and servicing, or safe operation of the equipment. If more information is needed, please contact your General Foreperson so they can contact the Equipment Department at the Canoga Park office.

OUTRIGGER-BOOM INTERLOCK SYSTEM (IF EQUIPPED)

Some Aerial Devices are equipped with an Outrigger Boom Interlock system. The purpose of the outrigger interlocks system is to prevent operation of the booms unless the outriggers are lowered.

NOTE: Not all Aerial Devices are equipped with an outrigger interlock system. Refer to your Aerial Device Operators and/or maintenance manuals.

AERIAL DEVICE AUXILIARY ENGINE

Some Aerial Devices are equipped with an auxiliary engine, or pony motor, for an additional power source. The pony motor is there so that during the running of the lift, or while tree trimming is in progress, you can use the auxiliary engine as your primary power source. By running the pony engine, many years can be added to the main truck engine which is not really designed to run for extended periods of time at not much more than an idle. Plus, by using the pony engine as much as possible, there will be a big savings in fuel consumption because the pony engine is designed for this kind of use and will run more efficiently. The main truck engine is equipped with a PTO (power take off) mounted to the transmission which has a hydraulic pump mounted to the back of it, and that is the source of power for the hydraulic system.

DUMP OPERATION OF THE CHIP BOX

To operate the dump bodies on a manual truck use the following procedure:

1. While operating the dump bed the truck should be on level ground with both wheel chocks down, apply the emergency brake and put transmission in neutral.
2. Engage PTO or power source - PTO and dump cables should be free from rust and be operable.
3. Prior to raising the dump bed there shall be an audible warning given ("**dump bed coming up**") and audible response received.
4. After the operator has raised the dump bed to its desired height, make certain the dump control cable is locked into the neutral position; disengaging the PTO. This will insure any incidental movement of the dump bed does not occur making it safe to un-pin the tool boxes.
5. Crew personnel will then pin or un-pin the tool boxes, stand back and give an audible warning ("**all clear to lower dump bed**").
6. Operator will lower the dump bed only after checking for crew personnel and giving an audible warning ("**all clear, dump bed coming down**") , and **shall** receive an audible response.
7. Disengage PTO and shut off truck
8. Remember, visual and voice communication shall be maintained at all times.
9. No employee should operate the dump bed controls unless they have been trained in these procedures.

To operate the dump body on an Aerial Device use the following procedure:

1. While operating the dump bed the truck should be on level ground with both wheel chocks down, apply the emergency brake and put transmission in neutral.
2. Engage PTO or power source - PTO and dump cables should be free from rust and be operable.
3. Lower outriggers to the ground to activate interlock system (If equipped).
4. By using lower controls, raise upper and lower boom to assure adequate clearance for the dump bed.
5. There shall be an audible warning given "**dump box coming up**" by the operator and an audible response received before the dump bed is raised. The dump box operator shall have visual confirmation that all workers are clear of all pinch/crush points.
6. After crew personnel have completed pinning or un-pinning the tool boxes they shall give an audible warning "**all clear to lower dump bed**". The dump operator shall have visual confirmation that all workers are clear of all pinch/crush points.
7. Pinning or un-pinning from the lower pedestal area is strictly prohibited.
8. The operator will then give an audible warning "**all clear, dump bed coming down**" and shall receive an audible response before lowering the dump bed. After checking for crew personnel, proceed to lower the dump box. The dump box operator shall have visual confirmation that all workers are clear of all Pinch/crush points.
9. Return booms to the stowed position using the lower controls.
10. Raise outriggers to the travel position.
11. Disengage PTO and shut off truck or auxiliary engine.
12. No employee shall operate the dump box controls unless they have been trained in these procedures.

POSITION TRUCK FOR EFFICIENT WORK

Careful positioning of the truck can save you time and energy, promote safety, and improve the quality of trimming.

| WHAT TO DO | ESSENTIAL INFORMATION |
|---|---|
| 1. Size up the tree to determine the approach which will permit the greatest area of needed trimming before moving the equipment. (A) | (A) Locate the truck so that when you are ready to move the bucket up to the tree, it will approach the tree by the clearest route possible. The bucket is not to be forced in where there is not enough clearance. |
| 2. Check the approach you select to make sure that conductors will not interfere with the approach to the tree. | When leaves are on the tree, be sure to locate all wires before moving into the work area. Always check poles to see how many wires are up there. |
| If conductors make this approach unsafe, select another approach. | When working around wires, always make sure that you know the direction the bucket will go before you touch the controls. |
| 3. Check the parking area to make sure of: a solid base for parking and minimum obstruction and danger to passing traffic. | You must plan your method of approach to the tree and select and prepare the work site before moving the truck into position. Check the road shoulder for firmness before setting up the outriggers. |
| 4. Put unit in operation as outlined in the Aerial Device Operators Manual. | NOTE: Outrigger pads are required to be used at all times. |
| 5. Put on a safety harness and enter bucket. (B) | You may sometimes approach a large crown tree or one on a narrow road by parking the truck on the opposite side of the road. |
| 6. Snap safety line to safety harness and to D-shaped ring on edge of bucket or basket shaft. | Remember that when your booms extend over the road, passing trucks will have to be warned to prevent hitting unit. Also, traffic will have to be controlled when limbs are being dropped. |
| 7. Read the Aerial Device Operators Manual and all safety operators decals prior to operating the Aerial Device. | (B) Always tie in with the safety belt or harness and lanyard in the bucket. This protects the operator from falling in case of failure of the leveling system or if the boom should be struck by a passing truck. |
| 8. Plan carefully your intended moves of the boom to place you in the spot from which you can trim the tree. (A) | |

HOW TO MAINTAIN THE UNIT

The "Daily Aerial Device Safety Inspection Form" which follows this page, outlines the steps to be taken in the maintenance of the unit. All steps shall be completed daily for safety and to keep the equipment in operation every day.

Note: Refer to the Aerial Device Manual issued for the particular model you are using. If you do not have an Aerial Device Manual see your General Foreperson.

The Upper Boom and the Lower Boom also demand special attention at the end of each year. Specific instructions are given in the Aerial Device Manual.

This program of maintenance and inspection is of the utmost importance. It must be followed to insure safe, efficient, economical operation.

It is Company policy, as well as required by ANSI, that each Aerial Device be inspected annually. Upon completion of the inspection, an inspection sticker is to be placed inside the cab on the back glass behind the drivers head. If for some reason your bucket truck does NOT have an inspection sticker, or if it is outdated, please contact the Equipment Department at Canoga Park so arrangements can be made to have the inspection performed.

**DAILY AERIAL DEVICE SAFETY INSPECTION
FORM Instruction sheet****INSTRUCTIONS FOR FILLING OUT YOUR AERIAL DEVICE FORM
AND FOR MAINTAINING YOUR COPIES ARE AS FOLLOWS:**

1. This inspection form is important to the safety of your crew and you.
Thoroughly inspect your Aerial Device as you fill it out!
2. Print clearly all letters of your name and your General Foreperson s name.
3. Write all dates and equipment numbers accurately and clearly.
4. Mark each block with either a (G), if good, or with a (P), if not good (no such thing as "fair"). Do not put check marks or Xs" in these blocks.
5. If an item is NOT GOOD, note the problem. Be as detailed and thorough as you can. Use the Aerial Device Manual to identify parts. Use the back side of this form for additional equipment notes and comments.
6. If a block is not marked GOOD, be sure to follow-up with your General Foreperson.

Sec 12-8 thru 12-10 is for the Equipment Department to add what they need

TRAILER CHIPPER

Whether you operate a disc type chipper, or a drum style, there are certain fundamentals of operation, care and maintenance. No matter what manufacturer or model chipper you operate, these fundamentals, as well as the manufacturers' recommendations and guidelines SHALL be followed. By doing so, this will add to the efficiency and performance, as well as extending the life of the chipper.

As with every piece of equipment, you shall have the proper equipment operation and/or maintenance manuals for your model chipper.

TOWING VEHICLES**1.0 Policy Statement**

No vehicles or combination of vehicles shall be towed (traveling on a roadway) by means other than a tow -bar, ball-and-socket or pintle-hitch type coupling device, or saddle-mount connections which meet the requirements of the federal motor vehicle safety standards. Using ropes, chains, slings, straps or cables tied between two vehicles to tow (traveling on a roadway) is prohibited.

STUCK VEHICLE RECOVERY**1.0 Policy Statement**

Recovering a stuck vehicle and pulling it free is permitted using any of the following approved methods: winching, mobile vehicle recovery, jacking, and professional third-party services.

At no time shall the integrity of the facilities or safety of our employees be jeopardized!

2.0 Procedure

If your vehicle becomes stuck, follow these guidelines:

1. Contact your General Foreperson (GF) or direct Supervisor.
2. Evaluate the area and determine which of the following four procedures is BEST to follow:

2.1 Winching Procedure

2.2 Mobile Vehicle Recovery Procedure

2.3 Jacking Procedure

2.4 Professional Third-Party Services

2.1 Winching Procedure

Note: This winching procedure is applicable in all situations in which a vehicle-mounted winch is used. If your specific operations require an exception to the rules outlined in this section, contact the Corporate Safety Department for a specific variance. This procedure to proper winching techniques cannot cover all the possible situations in which you may need to use a winch. In the final analysis, the decisions you make will determine the outcome. So think through each situation and each step of use. Always be mindful of your own safety and the safety of others.

Off-road equipment is often equipped with a winch suitable to the size of the unit, to allow for extraction if the vehicle becomes stuck and for other operational purposes. Before winching, you shall read and understand the safe operation of the winch as outlined by the manufacturer and approved winching techniques described below.

Step 1 of 7: CONDUCT A JOB BRIEFING (shall include, but not limited to the following)

When performing your job briefing, thoroughly evaluate your surroundings and ask yourself:

Am I or any one on my crew in the line of fire?

- Inspect the area for additional hazards such as rocks, debris and trash. Determine the lean of the vehicle, and then determine if it can be safely extracted.
- Determine if the vehicle and its condition allow for a forward or backward pull.
- Select an anchor point best suit for the operation.
 - Identify an anchor point that will enable you to pull straight in the direction the vehicle will move.
 - The largest and strongest tree is recommended, but still may not be suitable. Inspect the condition of any tree chosen for decay, weak spots, dead or dying branches, exposed roots, soil condition and its lean
 - If the strap, cable, or chain is not long enough to reach a good anchor point, a second strap, cable, or chain may be used of equivalent strength rating.
- Consider if you need to use a snatch block to re-direct the location of pull. Doubling the strap, cable, or chain increases the strength of the pull and reduces the pressure on the anchor point.
- Consider digging a path for the wheels to follow; this will decrease the ground/soft soil resistance to the vehicle.
- ALWAYS make sure coworkers/spectators are kept a safe distance when winching (1 ½ times cable length).

Step 2 of 7: PREPARE CABLE

- Free the winch-hook from its anchor point. Use a Hook Strap to hold the winch-hook and keep fingers away from the fairlead as the wire rope is spooled. Winches develop tremendous pulling forces and can easily remove fingers and limbs that are placed in pinch points. If you do not have the hook strap, use a length of cord or something similar. To prevent serious injury, do not put your fingers inside the hook area as you are powering in.
- Keep your hands and clothing clear of the wire rope, hook and fairlead opening during operation and when spooling. Avoid loose fitting clothes or anything that could become entangled in the wire rope and other moving parts. Always wear gloves when handling wire ropes, cables, etc.

Step 3 of 7: PULL WINCH CABLE TO ANCHOR POINT

- Never attempt to disengage the clutch while winch-cable is under tension.
- Never engage the clutch while the drum is rotating. Always make sure the clutch is fully engaged or disengaged.
- Pull out enough winch-cable to reach your anchor point. Be sure to keep a certain amount of tension in the cable as it can become twisted and over-wrapped if slackened, leading to cable damage. To prevent losing the end, old the winch-hook in the hook strap while you work.

Step 4 of 7: SECURE TO THE ANCHOR POINT

- Choose an anchor point.
- An anchor must be strong enough to hold while winching. Natural anchors include trees, stumps, and rocks. Hook the cable as low as possible. Beware of overhead conductors.
- When recovering another vehicle and no natural anchors are available, your vehicle could be used as the anchor point. In this case, be sure to put the transmission in neutral, apply the hand brake and block its wheels to prevent your vehicle from moving.

Step 5 of 7: ATTACH AND TIGHTEN WINCH-HOOK

- Once you have established your anchor point, secure the anchor strap around the object. The anchor strap shall be specifically designed for this purpose and have a weight/strength capacity at least that of the winch. Synthetic rope shall NEVER be used unless marked as an anchor strap or towing strap.
- Depending on the type of strap, use either a chocker hitch or a shackle to attach the two ends of the strap to the winch-hook. If using a shackle, be careful not to over tighten (tighten by hand and back-off 1/2 turn).
- Using the winch switch, slowly wind the winch-cable until no slack remains. Once the winch-cable is under tension, stand well clear, and never step over it.
- Make sure all connections are secured and free of debris before continuing with the winching procedure.

WARNING:

NEVER put a winch rope around an anchor and hook it back on itself. .

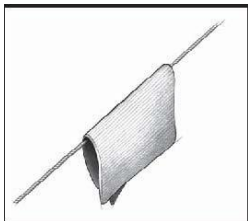
NEVER use the winch as a hoist (for vertical lifts). .

NEVER use a winch to pullover a tree! .

NEVER use a utility pole or any structure (such as a guy wire anchor) as a winching anchor. .

Step 6 of 7: BEGINNING THE PULL

- Midway between the winch and the anchor point, lay something over the winch-cable to absorb energy should the winch-cable snap loose. A blanket, heavy jackets, chaps, backpack and the like may be used for this purpose.
- Use a spotter that has a clear view of the anchor point and the operator of the winch. The spotter shall remain 1 ½ times the extended cable length away from the winching area,
- Stay clear of the cable and the path it would take if it snaps. Be sure to stay out from under utility hardware.
- With the winching vehicle's engine on and light tension already on the winch -cable, begin winching slowly and steadily. Communicate with those around you. Be sure that the winch-cable is winding evenly and tightly around the spooling drum. For additional assistance, the winched vehicle can be slowly driven while being pulled by the winch.



Step 7 of 7: SECURE VEHICLE

Once recovery of the vehicle is complete, be sure to secure the vehicle's brakes and put the Transmission in park (automatic) or low gear for (manual) transmissions. Release tension in the winch-cable.

- Disconnect the winch-cable. The person handling the winch-cable should walk the cable in and not let it slide through their hand, controlling the winch at all times. Use a hook strap to prevent pinching your fingers in the fairlead or drum.

What to look for under load:

- The winch-cable must always spool onto the drum as indicated by the drum rotation decal on the winch.
- As you power in, make sure the winch-cable winds evenly and tightly on the drum. This prevents the outer winch-cable wraps from drawing into the inner wraps, binding and damaging the winch-cable.

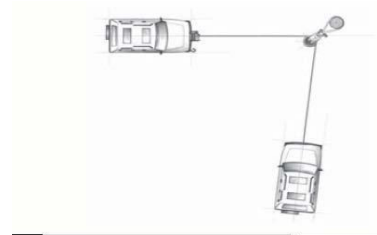
Rigging Techniques

Various winching situations will require application of other winching techniques. These could range from too little distance to achieve maximum pull using straight line rigging, simply increasing pulling power, or maintaining a straight-line pulling situation. You will have to assess what technique is correct for your situation.

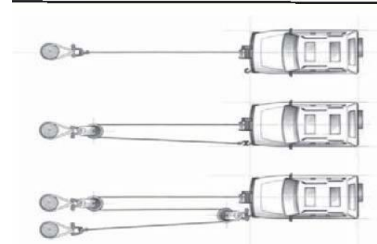
Think “safety” at all times.

How to change the pulling direction

All winching operations should have a straight line from the winch to the object being pulled. This minimizes the winch-cable from collecting on one side of the drum, affecting pulling efficiency and damaging the winch-cable. A snatch block, secured to a point directly in front of the vehicle, will enable you to change your pulling direction while still allowing the winch-cable to be at a 90° angle and wind properly onto the spooling drum.

**Increasing pulling power**

In some cases, you may find yourself needing more pulling power. The use of snatch blocks increases mechanical advantage and that increases your pulling power.



Step 1 of 8: CONDUCT A JOB BRIEFING (shall include, but not limited to the following)**2.2 Mobile Vehicle Recovery Procedure**

To ensure the safety of our employees and the reliability of utility customers, a professional towing service shall be used when we cannot safely recover a stuck vehicle.

- Only use an approved towing strap, cable or chain rated for the weight/strength of the pull. A good rule of thumb is to use a strap, cable or chain rated greater than the gross vehicle weight of the larger of the two vehicles.
- Inspect the area for additional hazards such as rocks, debris and trash. Determine the lean of the vehicle, and then determine if it can be safely extracted.
- If the strap, cable, or chain isn't long enough to reach a good anchor point, a second strap, cable, or chain may be used of equivalent strength rating.
- Consider if you need to use a snatch block to re-direct the location of pull. Doubling the strap, cable, or chain increases the strength of the pull and reduces the pressure on the anchor point.
- Consider digging a path for the wheels to follow; this will decrease the ground/soft soil resistance to the vehicle.

Step 2 of 8: SECOND VEHICLE REQUIRED

- Re-inspect the anchor(s) after a little tension is applied to ensure it will sufficiently support the weight of the vehicle.
- **NEVER** use a utility facility (pole, guy, tower, etc.) as an anchor point

Step 3 of 8: POSITION VEHICLES

The recovery technique requires a second mobile vehicle and a strap, cable, or chain to perform the recovery.

Step 4 of 8: SECURE STRAP, CABLE, OR CHAIN

Position the mobile vehicle to allow the strap, cable, or chain to be attached, while avoiding getting stuck as well. The direction of both vehicles should be lined up as straight as possible and the strap, cable, or chain should not be twisted.

DANGER - Never place a cable, chain or strap over a tow ball as it is not rated high enough and can break with fatal results, (people have actually died this way). If a tow bar is the only rear-point available, then remove the tow ball and use a rated shackle. Some light duty tow bars are unsuitable for recoveries, as they are not designed for the high-shock loadings that a recovery places on them. You should never walk over a cable, chain or strap once it is connected at both ends.

Step 5 of 8: LAY SOMETHING OVER CABLE, CHAIN OR STRAP

Hook the strap, cable, or chain to a suitable vehicle anchor point, remove the slack, and recheck the anchor points.

Step 6 of 8: GIVE SIGNAL

Lay something over the strap, cable, or chain at the midway point to absorb energy should the strap, cable, or chain snaps loose.

A blanket, heavy jackets, chaps, and the like may be used for this purpose. Once the vehicles are connected and all others are out of the line-of-fire, (a minimum of 1 ½ strap lengths in ALL directions), the stuck driver should signal (by hand, flashing his lights, CB, etc.) when he or she is ready.

Step 7 of 8: DRIVE OFF AT STEADY PACE

The mobile vehicle should drive off at a steady pace (1 or 2 low gear is recommended). The driver of the stuck vehicle should have the engine idling in either reverse or 1st low range, (depending on the direction of pull), and as soon as the pull is felt, attempt to drive out.

Step 8 of 8: STOP WHEN CLEARED

Be careful not to run over the cable, chain or strap as you drive out. Stop as soon as you are clear of the stuck area and remove the cable, chain or strap.

2.3 Jacking Procedure

A jack can be used to lift one end of a vehicle up and off the ground to enable rocks or timber to be placed under a stuck vehicle so it can regain traction. In addition, a jack can be used to lift one end of a vehicle off the ground so it can be positioned to gain firmer ground. This jack, in conjunction with cables, chains, ropes or straps, can also be used for winching.

Step 1 of 4: CONDUCT A JOB BRIEFING (shall include, but not limited to the following)

- For jacking a vehicle, a jack plate may be needed. It may be used as a base for the jack when jacking on soft or uneven ground.
- An outrigger pad can be used as a jack plate.
- To ensure the safety of our employees and the reliability of utility customers, a professional towing service shall be used when we cannot safely recover a stuck vehicle.

Step 3 of 4: JACK UP WHEEL

- Switch off engine, leave vehicle in gear with the emergency brake set, and chock the wheels
- Jack up the wheel to provide necessary clearance. In doing this, ensure:
 - (1) The jack is stable.
 - (2) Do not raise the vehicle more than necessary.
 - (3) You have packed under the wheel with suitable shoring material.

NOTE: Jack up the lower side rather than the higher side. (If roll over is likely, DO NOT attempt jacking. Contact professional third-party service.)

When clearance has been gained, remove the jack and wheel chocks, then inch the vehicle over the obstacle.

2.4 Professional Third-Party Recovery Services

If the determination is made that we cannot safely recover a stuck vehicle, a professional towing service shall be used.

Step 1 of 3: PERFORM A HAZARD ASSESSMENT

Perform a hazard assessment to determine if all processes reviewed in the previous three steps can be performed safely.

2 of 3 CONTACT A LOCAL THIRD PARTY TOWING COMPANY**3 of 3 GET OUT OF THE WAY**

- Each employee shall be physically positioned at least 1 ½ times away the length of the tow cable that is used by the Third-Party Towing Service.

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TOOLS

It is the policy of this Company to furnish you with the highest quality tools available that are suitable for your type of work. Your General Foreperson will determine the tools required for your specific crew(s).

It is your responsibility to properly train your crew(s) in the use, maintenance, and storage of tools. Proper training ensures that the tools will remain safe, perform efficiently and have a long life .

Set up daily check, using the following as a guideline:

- Inspect all tools to ensure that they comply with Company safety standards.
- Schedule routine maintenance as required.
- Make sure all tools are properly stored and secured to prevent damage and possible theft.

Training your crew to perform daily checks will result in a safer more efficient workday. The condition of the tools and equipment on the trucks will reflect the type of crew you lead.

If any tools are unsuitable, for any reason, contact your General Foreperson to have them replaced with the appropriate item.

Keep a notebook that includes all information that will be helpful when you need to have tools repaired. Information in the notebook may include; make, model and serial numbers as well as bar and chain information.

POWER AND BRUSH SAWS

Parts can be ordered through the Canoga Park office. If you have to buy parts locally in an area you're working in Get the price of the parts and repair cost and contact the Canoga Park office for a Purchase Order.

POWER TOOLS (Gasoline and Hydraulic)

Literatures supplied with the Tool ensure proper and safe operation of all power tools, refer to the manufactures tool. Follow the manufacturer's instructions for all repairs and general maintenance.

A. CLEANLINESS

As you know, good personal hygiene is essential to maintaining health. If you work in the field, follow these 3 tips:

- Bathe and wear fresh clothes daily. This will help to prevent skin irritation and infection.
- Cuts and scrapes should be cleaned immediately, treated with an antiseptic and covered with a bandage to keep out dirt until the wound is healed.
- Always wash hands before eating.

B. DRINKING FLUIDS

1. Your truck is equipped with an insulated sanitary container for drinking water. Keep it clean by frequent washing out with clean water and baking soda.
2. The common drinking cup is specifically prohibited. Disposable clean cups are available from your General Foreperson.
3. Do not allow your crew to drink large quantities of cold water when they're overheated. To do so may produce severe cramp and nausea.
4. Make sure employees drink water before they're thirsty. **Warning:** If your doctor limits how much fluid you drink, ask how much you should drink in hot weather.
5. Remind employees that drinks containing alcohol, caffeine, and sugar make the body lose water.

B. DIET

Hot weather work causes heavy perspiration. Long periods of this could result in loss of salt in the body which should be replaced, or heat exhaustion may result. Avoid heavy meals when working in hot weather.

D. SUNBURN

Prevent overexposing skin and eyes to direct sunlight and wind. Use sunscreen and lip balm. Use protective eye wear.

E. DUST

Some trees, especially during certain times of the year, produce considerable dust which may be irritating to some people. These people should be encouraged to use respiratory protection (i.e. dust mask only), which your General Foreperson can supply.

F. CARBON MONOXIDE

Carbon monoxide is an invisible, odorless gas which is always given off by combustion. Breathed in at even low levels, it will cause drowsiness, loss of consciousness and, finally, death.

Treatment for carbon monoxide poisoning is covered under First Aid in Section 18, but the best treatment is prevention - avoid breathing it by never running gas powered equipment of any kind in an enclosed space without adequate ventilation.

The truck exhaust system must be maintained to expel the exhaust gas clear of the personnel cab, and no heating devices using an open flame or any other form of combustion, such as a propane cooking stoves, may be used in the personnel cab or any other closed spaces in the vehicle.

G. STAPH INFECTION

Issue : What is staph or staph infection ?

Staphylococcus aureus, or staph (pronounced staff), are bacteria that healthy people commonly carry on their skin or in their nose. At any given time, about one-third of us are carrying staph bacteria but show no symptoms.

Sometimes, however, staph germs cause an infection. In the United States staph is a common cause of minor skin infections. Staph skin infections may look like a pimple or boil and can be red, swollen, painful, or have pus or other drainage. More serious staph infections include surgical wound infections, bloodstream infections, and pneumonia. Staph infections are often treated with penicillin or related antibiotics. Over the past 50 years, however, the staph germ has adapted so that some strains can resist antibiotics. These strains are called methicillin-resistant Staphylococcus aureus (MRSA).

Action: How to deal with staph infections.

If you get a staph infection and your doctor prescribes antibiotics, be sure to take your full prescription for as long as the doctor recommends. If you stint treatment or stop early, the staph could come back. If the infection does not improve when treatment is complete, contact your doctor for more instructions. Don't share antibiotics with other people, and don't save unfinished antibiotics to use at another time.

The best cure is prevention. Here are some ways to keep staph from getting out of control:

- A. Keep your hands clean: Wash thoroughly with soap and water or use an alcohol-based hand sanitizer.
- B. Keep cuts and scrapes clean. Cover them with bandages until they heal. Avoid contact with other people's wounds or bandages.
- C. Avoid sharing personal items such as towels or razors.

H. Information for Employees Using Dust Mask Respirators on a Voluntary Basis

Respirators are an effective method of protection against hazards when properly selected and worn. Respirator use is not mandatory and may be used for comfort. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to you, the worker. If you have been provided with a dust mask type respirator for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

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A. EMERGENCY PHONE NUMBERS

1. Whenever an emergency requiring outside help develops, that help should be called as quickly as possible.
2. For life threatening situations call 911 immediately, for all other situations contact your General Foreman.

B. FIRST AID

3. By reference, your Standard First Aid/CPR Manual for which you received training is made part of this Manual.
4. By reference, the Company's Blood borne Pathogen Exposure Control Plan in which you received training is made part of this manual.
5. Rescue Breathing

Every crew member should be familiar with both rescue breathing and cardio-pulmonary Resuscitation (CPR).

Rescue breathing should be started as quickly as possible, since delay may be fatal. If for any reason it is necessary to move the victim before breathing has been restored, rescue breathing should be continued during the time they are being moved.

As soon as rescue breathing has been started, and while it is being continued, an assistant should loosen any tight clothing around the victim's neck, chest, or waist. Never give the victim liquids until they are fully conscious.

Continue rescue breathing without interruption until natural breathing is restored or until a physician takes charge. A brief return of natural respiration is not a certain sign that rescue breathing should be stopped. Not infrequently the victim, after a temporary recovery of respiration, stops breathing again. The victim should be watched carefully, and if natural breathing stops, rescue breathing should be resumed immediately.

In carrying out rescue breathing for a prolonged period, it may be necessary to change operators.

When this is done, care should be exercised so that the rhythm is not interrupted.

Even after breathing has been restored, keep the victim lying down so as to avoid heart strain and await help.

4. Control of Bleeding and Unconsciousness

Refer to 15-9 and 15-10

C. RESCUE PROCEDURES

1. Rescue from a tree.

a. Evaluate the problem.

- (1) Is the victim conscious or not?
- (2) Is the victim in contact with energized equipment or branches?
- (3) Are there energized circuits or branches which will present a hazard to rescuers?
- (4) Are there any unusual conditions that could be a problem in rescuing the victim?

b. Plan the rescue. Know what you are going to do and how you are going to do it before the rescue is started. Don't immediately rush up the tree only to find that you have to go back down to get tools and equipment you should have taken up in the first place. Consider:

(1) Is there an electric contact that will have to be broken? If so, how can it be broken? Can the victim be pulled in the clear by manipulating the ground end of the climbing line? Will a pole clip be needed to pull the victim clear?

(2) How can the victim be lowered to the ground? Are there enough helpers present to lower the victim on their climbing line, or will the rescuer have to ride the victim down while slipping the taut line hitch?

(3) How can you best get into a position slightly above and to the side of the victim's head, where it's easiest to judge condition and action needed?

(4) If the victim is breathing, continue the rescue procedure and begin first aid treatment on the ground.

(5) If the victim is not breathing, five breaths of mouth to mouth resuscitation should be applied and the rescue procedure continued if the victim can be brought to the ground immediately. First aid treatment can then be given on the ground.

(6) If the victim is not breathing and cannot be brought down without delay. Mouth to mouth breathing and any other first aid treatment necessary should be applied in the tree, and continued until breathing is restored, or until competent medical assistance arrives, at which point the victim can be brought to the ground for further treatment.

2. Rescue from an Aerial Device

a. On lift crews, every crew member shall be instructed in the operation of the override control and the lower controls, and shall be fully capable of operating the lift by the lower controls.

b. Evaluating the problem and planning the rescue.

(1) The problem shall be evaluated and the rescue planned according to the same consideration outlined under Rescue from a tree.

(2) In addition, the person operating the lower controls must carefully consider the route to be used in bringing the bucket down and the possibility of bringing the wires down in the process.

3. Protecting the rescuer

In every rescue attempt, complete provision shall be made to protect the rescuer from becoming another victim. Such tragedies have happened, and never did a thing for the original victim.

RESCUE OPTIONS

1. Aerial Device is Operable

If the aerial device is operable and an employee becomes stranded, the following rescue method shall be used and must be practiced:

1st Choice - Lower Control Override: This procedure involves the manual manipulation of the lower controls by a fellow employee. If no electrical contact is present the employee may use their hands. If there is electrical contact potential, the employee shall use a wooden or fiberglass hanger puller/pruner pole to operate the lower controls without touching or climbing on the truck. **Practiced only with bucket unoccupied and close to the ground.**

2. Aerial Device is Inoperable

If the aerial device becomes inoperable and an employee becomes stranded, one of the following methods (in descending standard order) shall be chosen when attempting a rescue. The 1 choice is the preferred company recommended method. The 2 choice shall **only be attempted in a Life Threatening Situation**. The 3rd choice shall be used if the 1st and 2 choices are not doable

1st Choice - Transfer to another aerial device:

Another aerial device unit may be summoned and the employee transfers from one basket to the other. This technique requires the stranded operator to remain tied-in at all times (i.e. adjustable safety strap or bucket lanyard - 100% Tied In).

Practice with buckets at ground level.

2nd Choice - Transfer or climb to an adjacent tree:

A tree may be used as a transfer point to escape from the inoperable unit. This technique requires the stranded operator to remain tied-in at all times (i.e. climbing line(s) and saddle tied into an adequate tree crotch and to the D-ring of the inoperable aerial device bucket).

Practice with bucket as close to ground level as possible.

Note: Optional Equipment: A drop line (rope or throw line) could assist the stranded operator in obtaining rescue equipment when working aloft.

3rd Choice – Contact 911 (Fire Department, Emergency Medical Services):

This may be used when the previous options are not doable. When this call is made, ensure that the 911 operator is given a full description of the bucket operator's condition and that you require the personnel and equipment for an aerial rescue.

Discuss as a rescue option, but never practice without Safety and Risk Managers Approval.

Rappelling out of an aerial device – is strictly prohibited!!! Do not practice or attempt rappelling out of an aerial device. This maneuver poses serious hazards that are unnecessary.

NOTE: Bleeding-down the aerial device: ONLY a person qualified in the manufacturer's techniques may bleed-down the aerial device; the aerial device cannot be returned to service until the holding valves are re-calibrated at the factory or replaced. Un-qualified persons shall never attempt to "bleed-down" an aerial device. All of these situations, such as an employee moving from one bucket to another bucket or an adjacent tree, the employee shall adhere to our company's 100% tie -in policy and remain tied-in at all times.

RESCUE PROCEDURES

INSTRUCTIONS: See **RESCUE OPTIONS** for best rescue procedure in given situations. These procedures cannot cover every rescue situation. If a rescue cannot be safely completed using existing safe work practices, immediately contact Fire Department/EMS for assistance.

Lower Control Override:

Note: In the event of electrical contact potential, employees shall (Practice with empty bucket only) never attempt to jump, climb onto, lean against or otherwise touch the truck directly with any part of their body or conductive tool.

Step 1 If there is **no** electrical contact potential, the employee may use their hands to switch the Override lever to the lower pedestal controls.

Step 2 If **there is** electrical contact potential, the employee shall use a wooden or fiberglass hanger puller, pruner pole to switch the override lever to the lower pedestal controls.

Step 3 Use lower pedestal controls and lower the stranded bucket to the ground.

Transferred to another aerial device:

(Practice with buckets at ground level)

Note: The rescue aerial device shall be placed level and close enough to the stranded aerial device for the employee to attach the adjustable safety strap from the rescue bucket to their body harness, without untying.

Step 1 Setup rescue aerial device adjacent to the stranded aerial device with ability to reach stranded bucket.

Step 2 Attach an adjustable safety strap to the rescue bucket D-Ring and hang strap across bucket.

Step 3 Raise rescue bucket using lower pedestal controls to position it beside and level with the stranded bucket.

Step 4 Stranded employee may now grab and attach the adjustable safety strap from the rescue bucket and attach it to their body belt or harness.

Step 5 Stranded employee must detach bucket lanyard from stranded bucket and climb into rescue bucket.

Step 6 Stranded employee can lower rescue bucket to the ground.

Transfer or climb to an adjacent tree (Shall only be attempted in a Life-Threatening Situation).

Step 1 Provide the stranded employee with approved climbing equipment.

Step 2 Use standard tree climbing techniques and tie into an adjacent tree.

Step 3 Run a separate climbing-line or pull-rope (hand-line) through the D-ring of the stranded bucket, to use as a handhold.

Step 4 Remove (unbuckle) your full body harness and lower yourself out of the bucket, using the separate hand-line to control your swing into the adjacent tree.

Step 5 Descend to ground on climbing-line.

Contact 911 Emergency Medical Services (EMS) / Fire Department

Step 1 Secure area to prevent further damage and prepare for EMS to arrive.

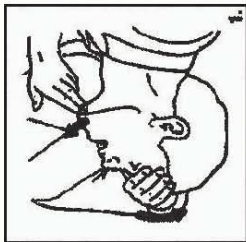
Step 2 Call or contact 911.

Rappelling out of an aerial device – is strictly prohibited!!! Do not practice or attempt rappelling out of an aerial device bucket. This maneuver poses serious hazards that are unnecessary.

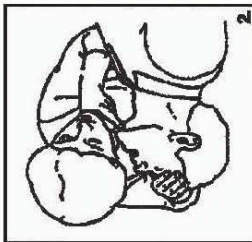
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WHEN SCENE IS SAFE – ADULT CPR

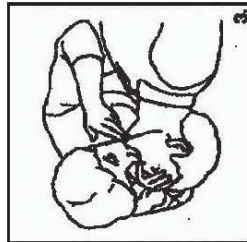
WHEN BREATHING STOPS



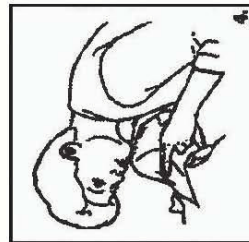
1. **Open the airway (use head-tilt/chin-lift method)**
Tilt head by pushing back on the forehead.
Lift chin by placing two fingers on the bony part of the chin and lift – do not press on the soft tissues of the neck or under the chin.



2. **Check for Normal Breathing (is victim breathing normally?)**
Maintain an open airway.
Place your ear over victim's mouth and nose.
Look at chest, listen, & feel for normal breathing for 5 to 10 seconds.
If "no breathing," follow step 3.



3. **Use Mouth Barrier if desired**
Give 2 Breaths (1 second each) - enough air to see the chest rise with each breath.
Maintain an open airway.
Pinch nose shut.
Open your mouth wide and make a tight seal around the outside of the victim's mouth or mouth barrier (if using one).
Give 2 breaths (1 second each) enough air to make the chest rise. Pause between each breath.
If chest does not rise, reposition the head by doing the head-tilt chin-lift again, give breaths.

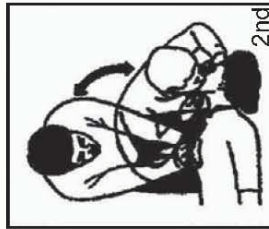


4. **Check for signs of circulation (for 5 to 10 seconds)**
Circulation signs are body movements or carotid pulse.
If no signs of circulation, start chest compressions.
If there are signs of circulation but no breathing, continue rescue breathing, 1 breath every 5 seconds; recheck for circulation every minute or two.

WHEN BLOOD CIRCULATION STOPS



- FIRST**
Victim needs to be on a firm surface face up
Kneel next to and facing the victim's chest.
Place heel of hand on the center of the chest, between the nipples.
Place other hand on top of the first, making sure fingers do not touch the victim's chest.
Position your shoulders over your hands with elbows locked, arms straight.

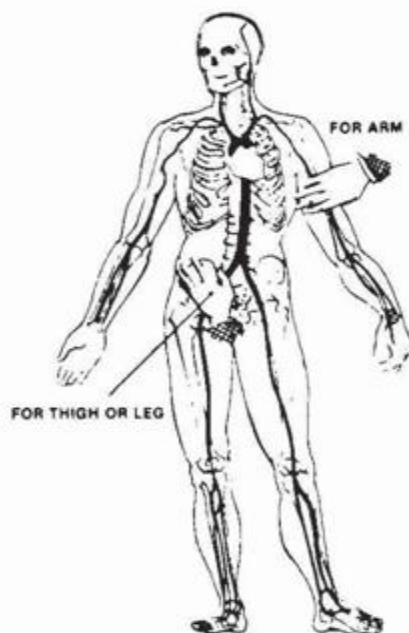


- SECOND**
Push down, Hard & Fast 30 times followed by 2 breaths
Compress breastbone $1\frac{1}{2}$ to 2 inches.
30 compressions should be completed in 20 to 25 seconds.
Count out loud, "1 & 2 & 3 & 4 & 30".
Allow chest to rise fully on the up stroke, but do not remove your hands from the chest during the 30 compressions.
After every 3 cycles of, 30 compressions with 2 breaths, check victim for signs of circulation. Continue all steps as needed.



- THIRD**
After compressions, open airway and give 2 breaths
After every 3 cycles of, 30 compressions with 2 breaths, check victim for signs of circulation. Continue all steps as needed.

Continue these steps until the scene is unsafe or relieved by a competent person.



CONTROL OF BLEEDING
WHERE TO APPLY PRESSURE TO STOP
ARTERIAL BLEEDING

THE THREE TYPES OF UNCONSCIOUSNESS
(RED) (WHITE) AND (BLUE)
NOTE THE COLOR OF THE FACE

| | RED | WHITE | BLUE |
|-----------|--|--|---|
| CAUSES | Sunstroke – Apoplexy – Alcoholism – Skull Fracture. | Common shock – Poison – Fainting – Heart Failure – Heat exhaustion. | Suffocation or Lack of oxygen. |
| SYMPTOMS | Face red or flushed – strong pulse – heavy or snoring breathing. | Pale face – weak pulse – eyes lack luster – skin cool and perspiring. | Face bluish color – victim usually not breathing – weak pulse. With the exception of Carbon Monoxide (face red). |
| FIRST AID | Place victim in lying down position – elevate head – apply cold applications to head – loosen tight clothing – call for doc- tor and ambulance – give no stimulants – Transport lying down. | Place victim in lying down position – keep head level or low – cover with blankets over and under – pass an inhalant under nose if there is no bleeding – call for doctor and ambulance – Transport lying down. | Move into open air. Apply artificial respiration – call for doctor and ambulance – cover with blankets over and under. |

FIRST AID IS THE IMMEDIATE, TEMPORARY TREATMENT GIVEN IN CASE OF AN ACCIDENT OR SUDDEN ILLNESS BEFORE THE SERVICES OF A PHYSICIAN CAN BE SECURED.

D. RESCUE PRACTICE

Rescue shall be practiced, monthly and documentation maintained for at least 12 months. Following each such practice, the elements of First Aid and CPR shall be discussed and practiced.

E. HEAT STRESS POLICY

1.0 It is Company policy that heat illness prevention be applied to control the exposure to heat illness during outdoor work when the environment poses significant risk.

2.0 Education and training for all exposed employees through the Company Heat injury Illness Prevention Program.

2.1 The following topics shall be reviewed with all employees. Read and discuss the topics below the definitions are intended to help clarify the topics:

2.1.1 Environmental and personal risk factors for heat illness.

2.1.2 Management shall routinely observe employees and check them for heat illness during working hours.

2.1.3 Stress the importance of frequent consumption of small quantities of water, up to four cups per hour under extreme conditions of working in heat.

2.1.4 Understand acclimatization. The different types of heat illness and common signs and symptoms.

2.1.5 Use the Foreperson's Manual or Heat Exposure Guide for reference.

2.1.6 The importance of immediately reporting heat-related illness issues.

2.1.7 First Aid and CPR as relates to heat illnesses.

2.1.8 Emergency medical service contact procedures.

3.0 Definitions (Training Aid)

Acclimatization means temporary adaptation of the body to work in the heat that occurs gradually when person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

Heat Illness heat load, and includes heat cramps, fainting, heat exhaustion, and heat stroke.

Environmental Risk Factors for Heat Illness

Means working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees.

Personal Risk Factors for Heat Illness

Means factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.

Preventative Recovery Period means a period of time to recover from the heat in order to prevent heat illness.

Shade means blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning.

Extreme Heat: A Prevention Guide to Promote Your Personal Health and Safety

Department of Health and Human Services — Centers for Disease Control and Prevention

During Hot Weather:

- **Drink Plenty of Fluids** During heavy exercise in a hot environment, drink two to four glasses (16-32 ounces) of cool fluids each hour (preferably water).

Warning: If your doctor generally limits the amount of fluid you drink or has you on water pills, ask how much you should drink while the weather is hot.

- **Replace Salt and Minerals** Heavy sweating removes salt and minerals from the body. These must be replaced. A sports beverage can replace the salt and minerals you lose in sweat. However, if you are on a low-salt diet, talk with your doctor before drinking a sports beverage.

Wear Appropriate Clothing and Sunscreen Outdoors, protect yourself from the sun by wearing a hat along with sunglasses, and by putting on sunscreen of SPF 15 or higher (products say broad spectrum or UVA/UVB protection on their labels) 30 (the most effective minutes prior to going out). Continue to reapply it according to the package directions.

Schedule Outdoor Activities Carefully Try to rest often in shady areas so that your body's thermostat will have a chance to recover.

Pace Yourself Start slowly and pick up the pace gradually. If exertion in the heat makes your heart pound and leaves you gasping for breath, STOP all activity. Get into a cool area or at least into the shade, and rest, especially if you become lightheaded, confused, weak, or faint.

Use a Buddy System When working in the heat, monitor the condition of your co-workers and have someone do the same for you. Heat-induced illness can cause a person to become confused or lose consciousness