



Training Solutions, Delivered!

TREE TRIMMING SAFETY

**Leader's Guide, Fact Sheet
& Quiz**

Item Number: 5201
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This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.

PREPARING FOR THE MEETING

Here are a few suggestions for using this program:

- a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.
- b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.
- c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.
- d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the page containing the answers to the quiz comes before the quiz itself, which is on the final page.

CONDUCTING THE PRESENTATION

- a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.
- b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.
- c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.
- d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

5201 TREE TRIMMING SAFETY FACT SHEET

LENGTH: 18 MINUTES

PROGRAM SYNOPSIS:

Tree trimming—It's a job that requires a professional attitude and a high level of training in order to work safely and productively. The very nature of tree trimming lends itself to many hazards. Of course, we all are aware of the potential of a serious fall, but there are also risks of coming in contact with energized utilities, falling trees and limbs, contact with poison ivy, oak or even snakes. High noise levels and contact with high-speed equipment such as grinders, chippers and of course, chainsaws also pose a hazard. This program discusses the safety precautions and maintenance procedures workers must follow to avoid injuries during tree trimming operations.

Topics include pre-job planning, PPE, maintaining tools and equipment, safe use of boom trucks, aerial baskets and ladders, safe chainsaw use, felling and bucking trees, overhead power lines and working with chippers.

PROGRAM OBJECTIVES:

After watching the program, the participant will be able to explain the following:

- What issues to consider when planning to perform a tree trimming operation;
- How and why tools and equipment must be properly maintained;
- What precautions to follow when using boom trucks, aerial baskets and ladders;
- How to use a chainsaw safely;
- How to avoid injuries when felling and bucking a tree.

INSTRUCTIONAL CONTENT:

TREE TRIMMING HAZARDS

- Tree trimming—It's a job that requires a professional attitude and a high level of training in order to work safely and productively. The very nature of tree trimming lends itself to many hazards.
- Of course, we all are aware of the potential of a serious fall, but there are also risks of coming in contact with energized utilities, falling trees and limbs, contact with poison ivy, oak or even snakes. High noise levels and contact with high-speed equipment such as grinders, chippers and of course, chainsaws also pose a hazard.
- Following all local, state and federal regulations will ensure a safe operation.

IMPORTANCE OF A GOOD TREE TRIMMING PROGRAM

- Both employees and supervisors must have a thorough knowledge of the equipment, operation and skills necessary to perform the job safely and efficiently.
- The supervisor must make many decisions that affect the safety of the crew and the crew must make a conscious decision to follow these recommendations and policies and work safely; therefore, a job briefing is required. It's a team effort.
- A good tree trimming program must be designed to provide safe working conditions, the training needed to do the job safely and efficiently, selection of qualified personnel and providing well-maintained tools to do the job. In addition, a good safety program will include first aid training and an accident reporting and investigation program.
- A typical tree trimming crew should be made up of a minimum of two climbers and a combination driver and brush person. It should be noted, however, that climbing trees should be avoided whenever possible. The majority of trimming should be done in an aerial basket for safety.

PRE-JOB PLANNING

- There are a many things you need to take into consideration before beginning the job: the shape of the tree, the lean of the tree, wind force, decay or weak spots and the location of other personnel, the public, adjacent utilities or other concerns during the project. A five-ton tree placed across a \$30,000 car will get a lot of attention, as well as a lot of bad press and increased insurance rates.
- Tree trimming requires careful planning and instructions for all working on the project. Each worker must be given exact instructions as to their role during the job. The safety considerations must be discussed in advance of the project as well.

- A safe area for the public must be cordoned off to keep bystanders and sidewalk supervisors out. Check the area for potential damage claims, such as houses, overhead lines and cars.
- If overhead lines are in the way, the utility must be contacted to de-energize the line before work begins. This can be pre-planned in advance to reduce down time.
- Be sure a path is cleared to the working area to allow for a rapid, unobstructed exit. Remove branches, brush or anything that could cause a problem during the escape.
- If the plan is to climb the tree for trimming, the supervisor must first evaluate the tree to assure that it is safe to climb, looking for weak or rotten limbs, power lines or even a weak tree in itself.

PERSONAL PROTECTIVE EQUIPMENT

- Personal protective equipment, or PPE, is required. Eye and face protection are a must. You'll also need a hardhat for protection from falling branches.
- Shin guards can help reduce injuries from rolling logs and branches, as well as afford some protection from an errant chainsaw bar.
- Hand protection is also a necessary item to protect from contact with splinters, rough bark and sap.
- A good steel-toed boot is important as protection from falling or rolling objects. For additional protection, metatarsal guards are also recommended. If there are any operations of a chainsaw occurs at the ground level, chaps or leg protection is required.

MAINTAINING TOOLS & EQUIPMENT

- Ask any carpenter if his saw is not sharp, he can't do the job. The same goes for trimming; sharp tools are important. They make the job go easier, faster, and safer.
- To keep saws, axes, and pruning tools sharp, they must be maintained on a frequent basis. In addition, unprotected tools thrown in the back of a truck quickly become dull or are damaged.
- Be sure that all saws and sharp tools are sheathed when stored or while not in actual use and especially while climbing.
- Chainsaws are deserving of extra care and respect. It's not necessary to show pictures of cuts and amputations. You know the risk chainsaws require a thorough working knowledge, but be sure you have been trained in their use.
- Ropes, safety belts, climbing spikes, and all fall arrest equipment require special care as well. Ropes must be inspected periodically for damage. Worn or damaged roped should be replaced immediately.
- Avoid throwing damaged ropes in the trash for some other unsuspecting soul to fish out and use. Destroy worn or damaged ropes and belts for everyone's sake.
- Ropes and belts must be kept away from acids, oil, chemicals and all sources of excessive heat. Store your ropes and belts separate from sharp edged tools and equipment.
- Avoid dragging ropes and belts to and from the job. Ropes should be carried to avoid dragging them over rough surfaces.
- Belts also must be closely inspected for their condition. Look for worn material, damaged stitching and damaged D-rings. Any material in need of repair must be taken out of service immediately and tagged as "dangerous."

POLES AND POLE PRUNERS

- Poles and pole pruners used in tree trimming must be insulated against electrical hazards as poles are frequently used to move or cut branches from around electrical wires. Check them frequently for damage.
- Never use pruners with a chain or wire attached to the cutting head near electrical hazards. It is recommended that 3/8-inch polypropylene line be used for the cutting head.
- Be sure the head of the pruner is always locked in the "closed" position when not in use.

BOOM TRUCKS AND AERIAL BASKETS

- Boom trucks or aerial baskets are a great benefit for working in trees. Before using aerial trucks, the operator and trimmers must be trained in the safe use of the equipment.
- New operators should practice use of the controls from the ground controls with no one in the bucket first and when proficient from within the bucket in non-job situations. Smooth operation is a must, as rough operation is dangerous and will damage the equipment.
- Before using the aerial basket, check for any hydraulic oil leaks, damaged lines or cables. Check that the automatic basket leveling system is functioning properly. Report any creeping of the boom, which may indicate a system leak.
- There should be no moisture on the boom or bucket, as accidental contact with energized lines can provide a path for electricity to follow.
- It is important to never exceed the safe rated capacity of your aerial truck at any time.

- When preparing to use the aerial truck, always lower the outriggers and level the vehicle before attempting to use the bucket.
- When working in the bucket, a fall protection harness is required, as falls can still occur even in aerial buckets.

SAFE LADDER USE

- You may also need to use a ladder. They also need to be inspected every day. Look for cracked rails and rungs. The safety feet or spikes should be in place and working properly. Check the rope and pulley on extension ladders for wear.
- Metal or aluminum ladders have no place in the tree trimming profession. Accidental contact with energized electrical lines is a great risk and metal ladders only act as a direct ground, causing electrocution. Use only approved wooden or fiberglass ladders, no exceptions.
- Ladders must be placed at an angle of about four to one for safe climbing. This means if the landing is 20 feet high, the base of the ladder should be five feet away.
- Ladders should also be secured at the top to prevent movement or slippage. Some ladders even have a fabric belt used for the top rung so it will conform to the shape of the tree reducing the chance of slippage.

SAFETY BELTS AND CLIMBING ROPES

- No work should be started until you are secured to the tree by a safety belt.
- If climbing ropes are used, they must be crotched out so the rope can't work out on to a weaker point on a limb.
- If a single-crotched rope does not afford adequate protection from falling, it should be crotched in two places.
- If working on a multi-trunk tree, the climbing rope should be secured to the main trunk as opposed to the other trunk where an employee is working.
- If working on a number of trees in close proximity, no one should be allowed to work near the potential path of the fall.

SAFE CHAINSAW USE

- When using chainsaws, eye and hearing protection is a must due to the flying material and high noise levels. Plus, leg protection such as chaps are required for incidental contact.
- Hoist up chainsaws with a rope if climbing and never attach a saw to your belt, as a serious injury can occur in the event of a fall, not to mention the potential of affecting your balance.
- Chainsaws must never be drop started; always start a chainsaw from a solid surface.
- Always operate a chainsaw with two hands for maximum control. Follow the manufacturer's specifications.
- A leading cause of accidents with chainsaws is from kickbacks, which is an upward jerking of the saw. Striking the tip of the bar against the wood causes kickbacks as does cutting above shoulder height, running the engine too slowly when cutting, a dull or loose chain or even a poor grip on the saw.
- Not all injuries are due to contact with a moving chain. Improperly carrying the saw can allow you to be cut if you should fall against the bar. Always carry chainsaws with the bar pointed behind you with the muffler away from your body and never carry a chainsaw on your shoulders!

LOWERING AND DROPPING BRANCHES

- When lowering or dropping branches or sections of the trunk, be sure that the area is clear of personnel.
- If branches are lowered by rope by the ground crew, the rope must never be tied to or wrapped around any part of the body. The result could be a nasty rope burn or even worse.
- Be sure to keep brush and limbs picked up as they can create an attractive nuisance to local children, putting them at risk of injury.
- All employees must be versed in the audible warning used to warn of a falling tree or branches such as "headache" or "watch down below."

REFUELING CHAINSAWS

- Refueling a hot saw is inviting a very serious fire from fuel flashback. Be sure you only refuel a cool saw and then only using a safety can and funnel to avoid spillage.
- Be sure to keep that fire extinguisher nearby and ready to use.

WORKING AROUND OVERHEAD POWER LINES

- When working around overhead lines, all lines must be considered energized.
- Parts of the tree in contact with lines should be cut with insulated tools and by qualified personnel that are trained and knowledgeable of safety work procedures and practices.

- It is very important to be sure limbs cut near lines never come in contact with your body, as the limb can act as a conductor of electricity causing electrocution.
- Damaged lines must be reported at once. Never try to touch or make a repair to a line yourself; leave that to the specialists. If necessary, contact the local power company for assistance.

FELLING TREES SAFELY

- Felling trees is serious business and is one of the most dangerous operations in tree trimming.
- Felling a tree requires a great deal more consideration than cutting a tree and running away. You will need to assess how to fell the tree safely, the direction of lean, slope of the ground, species of the tree, wind direction, the weight at the top of the tree, dead limbs, overhead utilities, etc.
- To safely fell a tree, it must be first back cut to control the direction of fall. Generally, a back cut is made by two cuts: one made horizontally about 1/3 the way through the tree or one inch vertical for every three inches horizontal and another cut intersecting at a 45-degree angle.
- To complete the fall of the tree, a back cut is required. A back cut must be level and sawn in slightly above the horizontal plane of the undercut to form an anti-kickback step.
- Again, be sure to check your organization's policy on felling.
- When felling a tree, your full attention is required. When a tree is about to fall, be sure to call out the warning, set down the saw and quickly leave the area in the opposite direction of the intended fall.
- Never, never turn your back on a tree about to fall, as you never know when the tree may spin or jack knife possibly causing fatal injuries.

BUCKING A FELLED TREE

- Once a tree has been felled, it will need to be bucked or cut into manageable sections.
- When bucking, be sure you never put yourself in a position where a log may roll against you. Be sure of your footing, trim away branches and material in the way of your saw, and clean away loose bark from under your feet.
- Stand to one side while cutting to avoid being struck by a kickback saw.
- If a tree is in a position making it too dangerous to cut, consult your supervisor on the procedures for bucking in these conditions.
- When cutting into sections, size up the situation to determine what movement the log might make after the cut. Logs to be bucked should be undercut to cause the cut section to fall away from the saw, preventing entrapment of the bar.
- You may even choose to slope the cut to allow the cut log to again fall away, but be sure to check with your supervisor on the methods of bucking required by your organization.

WORKING WITH CHIPPERS

- Chippers can be a scary and dangerous piece of equipment. The noise, speed of operation, and risk of serious injury all add up to the need to develop a healthy respect for that tree-eating monster. For in an instant, it can devour your arm as quickly as a branch.
- Chippers need constant maintenance. The engine oil and vital fluids must be checked daily. The blades must be kept sharp for efficient operation and the tires and tow assembly inspected on a frequent basis.
- When working with chippers, it's imperative to only load material within the capabilities of the equipment.
- Of course, due to the high noise levels, hearing protection is required.
- When loading brush and branches into the chipper, it is important to stand to one side, avoiding the potential of a material kickback.
- In addition, never put yourself in a position where you might be caught in the crotch of a branch, pulling you into the bar.
- Eye protection is required to protect your eyes from flying chips and debris. Proper eye and face protection shall be worn as protection from flying debris.

TREE TRIMMING SAFETY

ANSWERS TO THE REVIEW QUIZ

1. a

2. b

3. b

4. a

5. a

6. c

7. b

8. a

9. a

**TREE TRIMMING SAFETY
REVIEW QUIZ**

Name _____ Date _____

The following questions are provided to determine how well you understand the information presented in this program.

1. Climbing trees to trim them should be avoided whenever possible.
 - a. True
 - b. False

2. Keeping tree trimming tools sharp is NOT important.
 - a. True
 - b. False

3. Worn or damaged ropes and belts used in tree trimming should be discarded in the trash.
 - a. True
 - b. False

4. Poles and pole pruners used in tree trimming must be insulated against electrical hazards.
 - a. True
 - b. False

5. When working in an aerial bucket, a fall protection harness is required.
 - a. True
 - b. False

6. If using a ladder to reach a landing that is 20 feet high, the base of the ladder should be placed _____ away from the wall.
 - a. 3 feet
 - b. 4 feet
 - c. 5 feet

7. You should only drop start a chainsaw when its engine has already been warmed up.
 - a. True
 - b. False

8. When making a back cut to fell a tree, the cut must be level and sawn in slightly _____ the horizontal plane of the undercut.
 - a. Above
 - b. Below

9. Chippers used in tree trimming operations need constant maintenance.
 - a. True
 - b. False