

CHAIN SAW

SAFETY



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QUIZ

It is divided into two components:

ANSWER KEY7-8

Use it for grading purposes only. Do not distribute among the students.

QUESTIONS9-10

Make as many copies as needed to test the students on the presented program.

Digital 2000 has designed the **Training Materials supplement** to provide the trainer with resources that would enhance the training experience. Please note that this supplement **does not constitute compete training**. It is the responsibility of the employer to ensure that the employee or student receives appropriate training and comprehends the subject on which training is conducted.

This Leader's Guide is provided to assist in conducting a successful presentation.

INTRODUCTION: *A brief description of the program.*

PROGRAM OUTLINE: *Summarizes the program content. The program will be more meaningful if the outline is discussed prior to the presentation of the video.*

PREPARING FOR AND CONDUCTING THE PRESENTATION: *These sections will help you set up the training environment, help you relate the program to site-specific incidents, and provide program objectives for focusing your presentation.*

REVIEW QUESTIONS AND ANSWERS: *Questions may be copied and given to participants to document how well they understood the information that was presented. Answers to the review questions are provided separately.*

ATTENDANCE RECORD: *Document the date of your presentation, as well as identify the program participants. The attendance record may be copied as needed.*

INTRODUCTION

The chain saw ranks as one of the most dangerous tools found in the industry and home. The manufacturer provides safety and operating instructions on their equipment. This program includes safety tips and hazards of this equipment. Most chain saw accidents are a result of lack of proper training and unsafe acts by the operator. Safety in chain saw operations is critical.

PROGRAM OUTLINE

Risk of Injuries

- Experienced operators have a tendency to become negligent in respecting the chain saw and the hazards that can result.
- If you have worked for several years without an injury, you have taken the necessary steps to prevent injuries.
- You must be trained and authorized by your company prior to operating a chain saw.
- Injuries often occur while carrying the chain saw from job to job.
- Slips and falls, sprains and strains are common injuries due to working with a heavy saw in awkward positions and conditions.

- Lungs and eyes can be irritated from inhaling exhaust fumes.
- Eye protection is required since there may be flying chips and rocks.
- Burns are common from contact with hot exhaust parts or the cylinder head of the saw.
- Injuries can come from kickbacks or binding.
- Hearing protection is required due to the high noise levels of the chain saw.

Safety

- You must become familiar with the controls on the chain saw – throttle, hand holds, choke, oiler, chain brake, and fuel and oil tanks.
- Use the proper fuel to oil fuel ratio as recommended by the manufacturer.
- When refueling, never smoke or refuel a hot saw around combustible materials.
- Always use a safety container with a spring-loaded top which allows pressure to escape.
- The safety container has a flame arrestor located inside the can and prevents a flame to re-enter the can.
- Keep fire extinguishers close by when operating a chain saw.
- The chain saw can emit sparks and could ignite brush fires.
- Use a filler spout when filling the gas tank.
- Wear long pants to protect from wood chips, brush and insects.
- Do not wear jewelry as it can get caught on the equipment or other material.
- Steel-toed shoes, gloves, safety glasses, hard hat, ear protection and a face shield are recommended when operating a chain saw.
- Beware of snakes since they live in the same area you will be working.
- Know what to do in case of a snake bite or major injury.
- Carry the saw at your side and not on the shoulder.

Operation

- Follow company procedures and manufacturer's recommendations.
- When starting a cold motor, use the choke.
- Pull the starter cord away from the body.
- Start the chain saw from the ground or from a well supported position.
- Drop starts are hazardous and you could lose control.
- If you must cut while in a tree, pull the saw up by rope and then start it only when it is secured.
- Check for utilities when trimming brush and undergrowth.
- Think about parked cars, utility poles and pedestrians when cutting down a tree.
- Do not allow anyone within a 6-foot radius when working with a chain saw.
- Kickbacks occur by hitting a tree limb, running the saw too slow, cutting above shoulder height or poor or loose grip on the saw.
- The undercut is made with the saw rather than an axe.
- There are several undercuts – straight saw, stepped and V-shaped.
- Trees less than 18 inches in diameter the horizontal cut is preferred, chopping out the angular cut with a sharp axe.
- Large trees require the stepped undercut to keep the tree from rolling on the stump.
- When making a back cut, cut about 2 inches above and parallel to the undercut.
- Wooden wedges can be used to take the pressure off the saw.
- Before completing a cut that will fell a tree, make sure no one is in the area, turn the motor off and call out a warning.
- When a tree is about to fall, turn off the saw and set it on the ground near the base of the tree.

- Leave the area by a pre-planned route, at a 45-degree angle, opposite the direction of the fall.
- Try to face the tree in order to see what path it's going to take during the fall.
- The operator must plan ahead for hazards such as incorrect cuts that can cause a saw to jam or a log falling against your feet or legs.
- Serious eye injuries can result from flying bark, stones and dirt.
- Keep legs wide apart or positioned to one side of the saw for control in the event of kickbacks.
- Safety in chain saw operations is critical. Take time and effort to perform every job safely.

Chain Saw Safety

Operating a chain saw can be hazardous. According to the New York State Department of Transportation, these are the safety procedures that should be followed when operating a chain saw.

The potential for injury can be minimized by use of proper personal protective equipment and safe operating procedures. This document addresses safe operating procedures for chain saw work. However, anyone attempting to operate a chain saw should always refer to manufacturers' safety manuals.

Chain saw operators should be trained in the safe operation and maintenance of chain saws as well as CPR and First Aid training. For all operations involving the use of chain saws, it is strongly recommended that at least two people be knowledgeable in First Aid and CPR. Operators should follow all manufacturer safety procedures. All appropriate personal protective equipment should be used, including hard hat, chaps, and eye, face, foot, hand and hearing protection.

Equipment

Chain saws should be equipped with at least two separate anti-kick back features. Chain brake, low kick back chain, reduced kick back bar, or nose guard are among current devices available.

Personal Protective Equipment

- Hard Hat
- Chaps – leg protection apparel constructed of cut resistant material.
- Foot Protection
- Hearing Protection – any muff, plug or semi-aural protectors that can be properly worn with other required personal protective equipment.
- Face Shield – wire mesh or clear plastic designed for impact protection.
- Safety Glasses – should have side shields and be designed for impact protection.
- Hand Protection – appropriate gloves should be worn, when possible.

Fueling and Starting

- Store and carry gasoline in safety cans.
- Use a funnel or flexible hose fitted to the container when fueling saws.
- Clear the area around fueling site of flammable material.
- Do not fuel the saw with engine running.
- Do not start the saw in the same spot where it is fueled.
- Allow engine to cool before refueling.
- After fueling wipe chain saw clean before restarting.
- Keep a fire extinguisher available when refueling.

- Place saw on the ground or other firm surface to start. Make sure chain cannot contact ground or other objects.

General Safety Tips

- Never work alone with a chain saw.
- Never remove nose guard or chain brake.
- Chain brake must be engaged while starting.
- Keep engine free of saw dust.
- Clear away brush, rocks, fencing, etc. in the work area which might hinder movement.
- Always establish good footing.
- Keep others clear from areas of falling trees or rolling logs.
- Be alert for nails, wire, metal taps, etc. in trees.
- Keep cutting speed under control to avoid cutting too deep or at an improper angle.
- When moving with a saw, it should be grasped firmly in one hand and carried at the side with the bar pointing backwards. Special caution is necessary when the engine is running. The chain brake should be engaged during transport.
- Always look to the side before turning around. Face and hearing protection and engine noise will limit the operator's ability to know if someone is close.
- Stop the saw when doubtful about safety.
- Secured racks, boxes, bar holsters or sheathing, or other means should be used for transporting chain saws.
- A First Aid kit should always be immediately available.

TRUE/FALSE

1. Chain saws are dangerous and can do a lot of damage.

True False

2. Most chain saw accidents result from lack of proper training and unsafe acts of employees.

True False

3. It is okay to wear gloves when operating a chain saw.

True **False**

4. Due to the high noise levels of a chain saw, it is necessary to wear hearing protection.

True False

5. When refueling do not smoke or refuel a hot saw in an area such as dry brush.

True False

MULTIPLE CHOICE

6. Chain saw injuries can occur when _____.
- a. there is a lack of proper training and unsafe acts by employees
 - b. slips and falls when carrying a saw
 - c. sprains and strains when working with a heavy saw
 - d. all of the above**
7. When performing a cutting project, be sure items are out of the way that could impede an escape route such as _____.
- a. traffic
 - b. people
 - c. brush
 - d. all of the above**
8. When cutting a tree less than _____ inches in diameter, it is preferred to make a horizontal cut, chopping out the angular cut with a sharp axe.
- a. 10
 - b. 12
 - c. 16
 - d. 18**
9. When cutting a large tree, the stepped undercut should be at least _____ the diameter to keep the tree from rolling on the stump.
- a. one-half
 - b. two-thirds
 - c. one-third**
 - d. one-tenth
10. The undercut of a tree is usually made with a saw rather than an axe. The undercuts most commonly used are _____ saw cut.
- a. straight
 - b. V-shaped
 - c. stepped
 - d. all of the above**

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