

TREE PRUNING TOOLS

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1. GENERAL

1.01 This section lists the standard tools required for use in connection with trimming and pruning work and includes the principal use of each tool along with safety and maintenance requirements.

2. AERIAL LIFT VEHICLES

GENERAL

2.01 This part describes the use of aerial lift vehicles as they are used in line clearance work. The description and operation of the aerial lift is outlined in Sections 649-350-100 through 649-351-141.

SAFETY PRECAUTIONS

2.02 The following specifies the minimum working distances from energized conductors for employees engaged in line clearance work.

APPROACH DISTANCE (INCHES)	VOLTAGE RANGE (PHASE TO PHASE, RMS)
Avoid contact	300V and less
12	Over 300V, not over 750V
18	Over 750V, not over 2kV
24	Over 2kV, not over 15kV
36	Over 15kV, not over 37kV
42	Over 37kV, not over 87.5kV
48	Over 87.5 kV, not over 121 kV
54	Over 121 kV, not over 140 kV

This minimum distance applies to the employee, any portion of the aerial lift, any conductive tool, tree branches, or any other conductive material.

2.03 Do not bring aerial lift devices, including insulated aerial lift devices, into contact with an electrical conductor. Do not rely on their dielectric capabilities. When an aerial lift device contacts an electric conductor, consider the truck supporting the aerial lift device as energized.

NOTICE

Not for use or disclosure outside the Bell System except under written agreement

WARNING: When trimming trees on a joint use line, the employee must wear insulating gloves and protectors. These shall be tested before and after use as described in Section 081-710-200.

2.04 When trimming telephone plant on joint pole lines with long handle tools such as pole pruners or pneumatic pruners, employees should be constantly alert to assure these tools will not come in contact with electric wires.

2.05 Gas powered saws should not be used by telephone employees when working in an aerial lift basket.

2.06 Aerial lift baskets should not be used to lower any portion of a tree removed during line clearance. The basket should be limited to one man and authorized tools.

2.07 The basket or boom of an aerial lift should not be used for loading logs or wood on a vehicle.

2.08 Exercise caution when making the final cut on large limbs that are tied off with ropes. Even when properly secured with ropes, these limbs sometimes drop for a short distance, swing toward the trunk, or swing sideways. To eliminate any potential hazard of being struck by these limbs, partially finish the final cut; swing the basket to a safe position, and have the groundman finish breaking off the limb with the guide rope.

2.09 Before dropping limbs, the craftsman should be sure they will not become hung up on telephone cables, wires, or the aerial lift truck. Also, be sure the ground area is clear of anything that might be damaged by dropped limbs such as flower gardens, mail boxes, automobiles, etc.

2.10 Before limbs are jump cut to fall free, the employee should give an audible warning to alert anyone in the work area.

2.11 Employees should not transfer from the basket of an aerial lift to a tree or pole while working aloft.

OPERATING PROCEDURES

2.12 Correct cuts, particularly flush cuts (see Section 620-310-200), can only be made if

the basket and the employee are in the proper position to make these cuts. Craftsmen should take extra care to place the basket in the proper position for making correct cuts.

2.13 Time spent in making correct cuts is little, if any, longer than that required for cutting in a haphazard manner and will result in a neater and safer job.

2.14 To prevent limbs from falling on the employee or the basket while lowering or dropping limbs, keep the basket to the side or above the limbs being removed.

3. AXE CHOPPING

3.01 Due to the inherent hazard present when using an axe, and several alternative tools available, the use of an axe in line clearance work shall not be used.

4. B SOAP BRUSH

4.01 The B Soap Brush is a 1-inch brush which fits into and serves as a cover for B Soap Bucket tree paint or tree or limb cuts. The brush can be secured to the holder of the B Pole Pruning Saw for treating cuts that are not conveniently located for hand application. See Fig. 1.

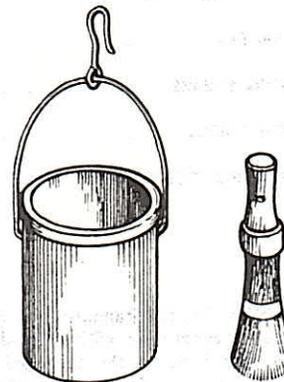


Fig. 1—Brush and Bucket for Applying Tree Paint

5. B SOAP BUCKET

5.01 The B Soap Bucket serves as an ideal container for asphalt tree paint. It is employed with the B Soap Brush. See Fig. 1.

6. BRUSH CHIPPER**GENERAL**

6.01 This part covers the safety aspects of using a brush chipper. While there is a variety of chippers available, they are basically similar in structure and operation. The owner's manual supplied with the units gives specific information on controls, lubrication, and maintenance.

6.02 Employees assigned to operate the chipper must be thoroughly familiar with the unit and the techniques of chipping brush.

6.03 These units are designed to chip brush and limbs up to 2 inches diameter depending on the type of wood. Green wood chips quite easily, but dry wood is difficult to chip and dulls the blade. See Fig. 2.

DESCRIPTION

6.04 These units are trailer-mounted and will blow chips into a vehicle or onto the ground. The exhaust chute is equipped with an adjustable bonnet to blow chips left, right, or straight ahead.

6.05 The brush is fed by hand into the feed table that folds up for safety while traveling.

6.06 The chipping is done by a set of revolving blades that work with a shearing action against a stationary cutter bar. The chips are then blown out the exhaust chute. See Fig. 3.

6.07 The unit is equipped with a rubber shroud mounted in the upper part of the hopper to deflect chips and dust from being blown back toward the operator.

6.08 The chippers are powered by heavy duty industrial engines. Depending on make and model, they weigh between 3 and 5000 pounds.

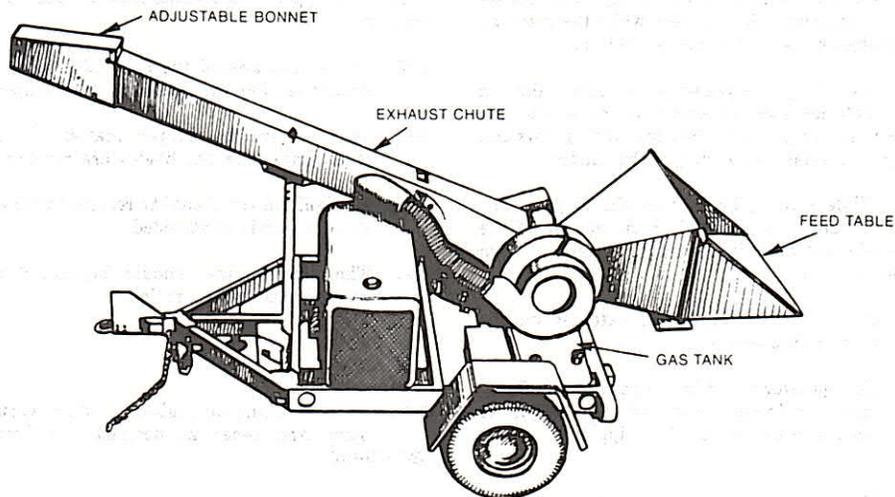


Fig. 2—Brush Chipper

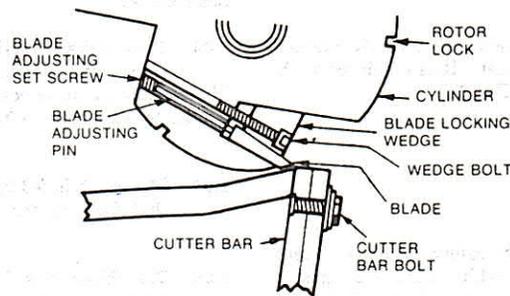


Fig. 3—Chipping Assembly

PRECAUTIONS

- 6.09 Personal protective equipment that must be worn while operating the chipper are gloves, hard hat, goggles, and hearing protection.
- 6.10 Loose clothing, gauntlet-type gloves, rings, and watches should not be worn while feeding the chipper.
- 6.11 Do not attempt to make any adjustments or to clean exhaust chute while the machine is running or the blades are in motion.
- 6.12 Do not put sweepings or other foreign material such as stones or nails into the chipper as they could become flying missiles. Foreign material also damages the blades.
- 6.13 While feeding brush into the chipper, the operator should stand on either side of the feed table, not directly behind it. There are two reasons for this:
- Brush has less chance of catching on the operator's clothing.
 - The operator is not in the path of any flying chips or foreign material that might be thrown backward out of the chipper.
- 6.14 Use a torque wrench to check the locking bolts that secure the cutting blades. Do this daily as per operator's manual. A blade that comes loose at high speed can be hazardous.
- 6.15 Whenever the blades have been changed, run the unit for a few minutes, then recheck the blades for tightness.
- 6.16 Do not attempt to feed short pieces of brush into the chipper. Use a long piece of brush as a poker.
- 6.17 Never place hands, arms, feet, legs, or any other part of the body on the feed table while the chipper is in operation or the blades are turning.
- 6.18 Check area around the feed table to assure proper footing while feeding the chipper.
- 6.19 Do not leave the chipper unattended while it is running or the blades are revolving.
- 6.20 The ignition key should be removed whenever the chipper is unattended.
- 6.21 The access panel should be closed and secured prior to operation.

OPERATION

- 6.22 When working on highways, place warning signs and cones as described in Section 620-135-010.
- 6.23 Start engine, engage clutch, and bring unit up to operating speed as prescribed in owner's manual.

6.24 Make sure the exhaust chute and bonnet are adjusted to blow the chips into the vehicle with a minimum amount of spillage.

6.25 While standing at the side of the feed table, feed convenient sized armloads of brush into the chipper until it contacts the blades. Immediately turn away from feed table to avoid brush catching on clothing.

6.26 Do not attempt to force brush into the unit. The brush should feed itself after initial contact with the blades. If the brush does not feed readily, the blades are dull or out of adjustment.

6.27 Clean up spilled chips or debris off roadway. Place sweepings directly into trunk. Do not feed them into chipper.

6.28 Loads of chips that are not in a covered truck must be covered with a tarpaulin. This is to keep them from blowing onto the roadway during transit.

6.29 Shut the unit down as directed by owner's manual.

DAILY MAINTENANCE

6.30 Check locking bolts on cutting blades.

6.31 Check entire unit for loose bolts as constant vibration while chipping tends to loosen bolts.

6.32 Check V belts for correct tension, see owners manual.

6.33 Check condition of rubber shroud.

6.34 Clean unit of chips and debris to prevent overheating and fires.

6.35 Check trailer hitch, tires, safety chain, signal lights, oil, and radiator level.

ACCESSORY TOOLS

6.36 Accessory tools include the following:

- Torque wrench
- Sockets to fit bolts on cutting blades
- Owner's manual

- Wrenches for tightening various body bolts.

7. PNEUMATIC PRUNERS

GENERAL

7.01 This part describes the safety precautions and operation of pneumatic pruners for use in line clearance work.

7.02 Because of the various makes and models available, this part is general in scope. The owner's manual furnished with each pruner must be consulted for specific recommendations and instructions for lubrication, sharpening, and maintenance.

7.03 Basically these tools do not use air expansively and thereby rely on high pressure for motive force. Depending upon make and model, they require between 120 to 140 pounds per square inch (PSI). The air consumption is between 6 and 12 cubic feet per minute (CFPM).

PRECAUTIONS

7.04 *Only objects which are to be cut should be placed between the blades.*

7.05 When it is necessary to perform any lubrication, maintenance, or adjustments to the tool, *disconnect air supply from the tool.*

7.06 Always keep both hands on the pruner while cutting. Keep one hand near the trigger and one hand on the shaft directly in front of the power cylinder. This will assure that the operator's hands will not be in the vicinity of the blades while cutting.

7.07 When pruners are used in an aerial lift basket, the basket must be equipped to store the pruners securely.

7.08 While pruning on joint pole lines, particularly where the vegetation is dense, the operator must be constantly alert to assure the pruner head does not contact electric wires.

WARNING: *When trimming trees on a joint use line, the employee must wear insulating gloves and protectors.*

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These shall be tested before and after use as described in Section 081-710-200.

7.09 Always stow the tool in the storage box or truck compartment when not in use.

DESCRIPTION

7.10 The pruners shown in Fig. 4 are typical pneumatic pruners. The model 500 is 4-1/2 feet long and weighs 7 lbs. The model QSA:21-1 is 6 feet 8 inches long and weighs 9-1/2 lbs. Both have the same cutting capacity, 1-1/2 inches.

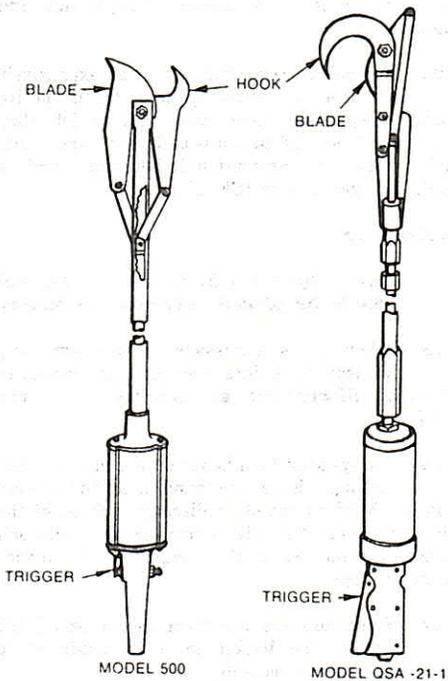


Fig. 4—Typical Pneumatic Pruners

7.11 The longer model is generally used when working in an aerial lift device. The shorter model is better suited to brush cutting, but it can be used from an aerial lift where the extra length is not required.

7.12 The pruners are equipped with a trigger mechanism located to the rear of the power cylinder for activating and cutting blade.

7.13 The blades can be removed for replacement or sharpening by removing the pivot bolts that secure the blades to the pruners.

OPERATION

7.14 The size of the limb that can be cut varies, depending on the type of wood and whether the wood is green or dry. Cut only the size limb that the pruner will cut easily. Attempts to cut limbs or brush that are too big for the pruners will result in excess wear on the pruners.

7.15 While cutting, never twist, pry, or exert leverage with the pruners as this will result in excessive strain on the pivot bolts and cause misalignment of the blades.

7.16 Nails, wire, and other metal objects should not be cut with the pruners as these blades are not designed to cut metal.

7.17 While pruning, extra care must be taken to place the pruners at the proper angle in relationship to the limb being cut to assure that all cuts are neat and flush. For flush cuts, see Section 620-310-200, Part 5.

8. TREE PRUNERS (AND HANDLES)

GENERAL

8.01 This part covers the description and use of the small and large tree pruners and associated handles.

DESCRIPTION

8.02 The tree pruner is an assembly consisting of a rope-operated cutting head, a head section handle, and one or more extension section handles. Handles and ropes are ordered separately.

8.03 The B Tree Pruner Head (Fig. 5) is used with the small tree pruner handles and has a cutting capacity up to 1 inch. The C Tree Pruner Head (Fig. 6) is used with the large tree pruner handles and has a cutting capacity up to 1-1/2 inches.

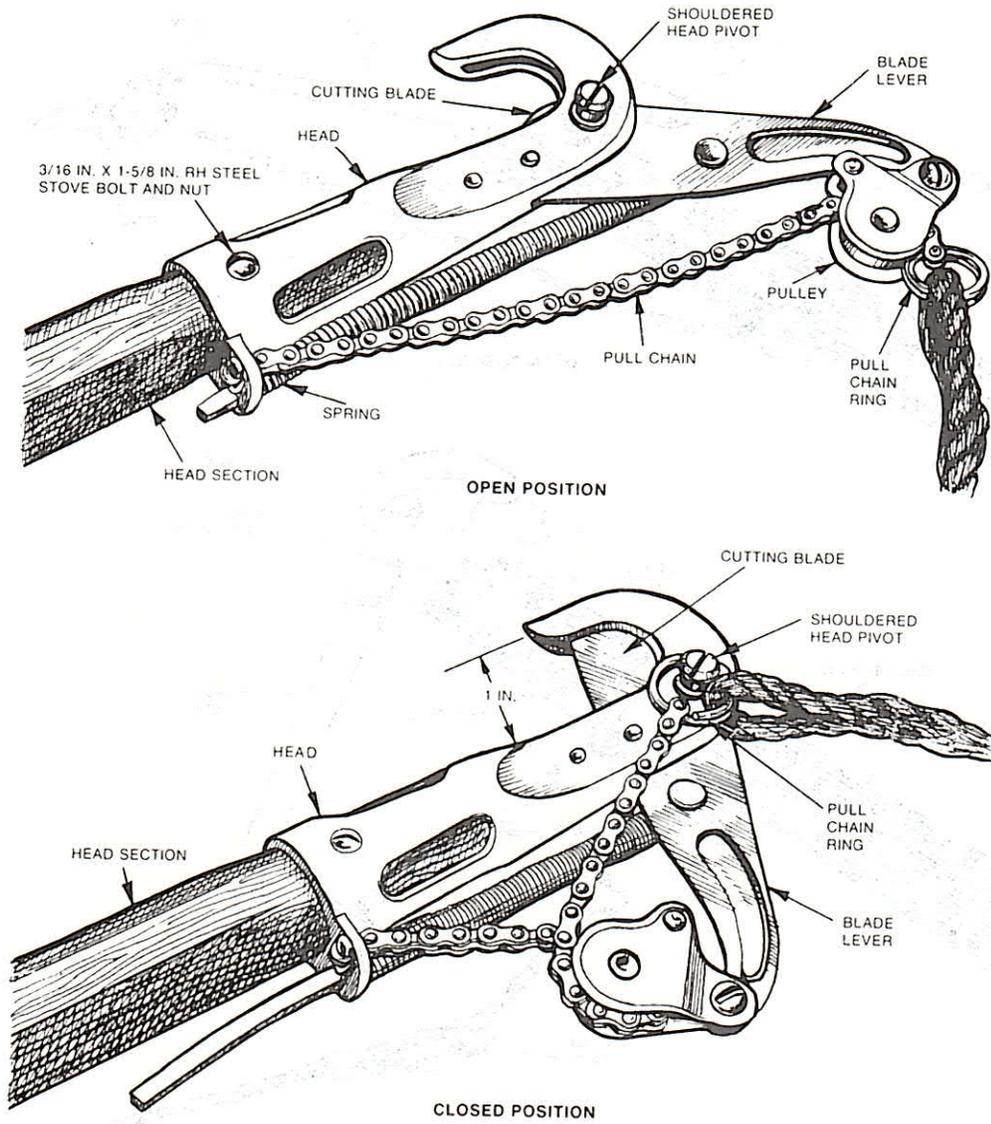


Fig. 5—B Tree Pruner Head—Open and Closed Position

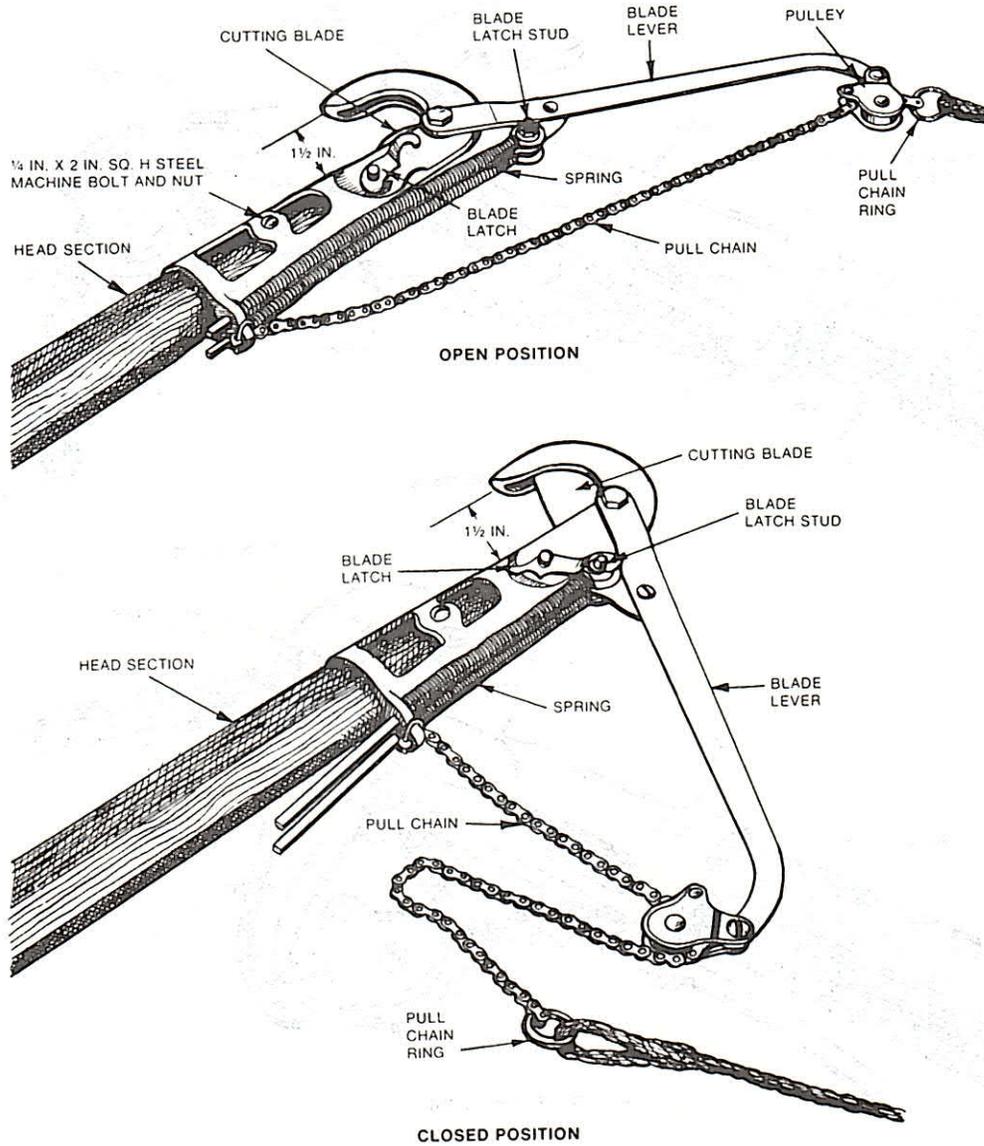


Fig. 6—C Tree Pruner Head—Open and Closed Position

8.04 Both pruners have a center-cut type blade which is held in open position by spring pressure. The blade is operated by means of a rope attached to a ring at the end of the pull chain. This chain runs over a pulley on the blade lever and terminates at the base of the pruner head.

8.05 The blade of the B Pruner can be locked in the closed position, as shown in Fig. 5, by slipping the pull chain ring over the shouldered head of the pivot bolt.

8.06 The blade of the C Pruner can be locked in the closed position, as shown in Fig. 6, by the blade latch which hooks over the blade latch stud.

8.07 The heads are painted bright orange and the lever and blade latches are painted black.

8.08 The tree pruner handles are provided in two sizes, designated as small and large. Each size handle consists of a head section and one or more extension sections. The sections are made of octagonal shafts of light wood and are equipped with telescoping ferrule connectors, the female ferrule being a spring actuated locking pin. See Fig. 7 and 8. The head section usually used with tree pruners is approximately 2 feet long, although one approximately 5-3/4 feet is available. Each extension section is approximately 6 feet long. Also, a tapered section approximately 5-3/4 feet long is available which permits joining tools and small sections to large sections on a composite handle. The small handle sections are 1-1/4 inches across flats of the octagon and the large handle sections are 1-3/4 inches.

SAFETY PRECAUTIONS

WARNING: When trimming trees on a joint use line, the employee must wear insulating gloves and protectors. These shall be tested before and after use as described in Section 081-710-200.

8.09 Always keep pruning heads locked in closed position when not in use or when in storage.

8.10 Do not pick up pruning heads by grasping the blade portion of the head.

8.11 Do not grasp the hook of the pruner because the rope or lever may inadvertently catch on some object and operate the blade.

8.12 When the blade is held in its closed position by mechanical means, it may be further secured by wrapping and tying the pulling rope around the handle.

8.13 Do not use a tree pruner head that is broken or cracked or has a dull or broken blade.

8.14 Do not use a tree pruner head that has a broken spring.

8.15 Do not use a split or broken pruner handle.

8.16 Do not use a tree pruner handle that has a loose ferrule or a broken spring catch.

9. ELECTRIC CHAIN SAW

GENERAL

9.01 This section covers the operation and safety precautions to be followed when using an electric chain saw in line clearance operations.

9.02 Because of the various makes and models available, this part is general in scope. The owner's manual furnished with each saw must be consulted for specific recommendations and instructions for lubrication, sharpening, and maintenance.

9.03 These saws are for the specific use of working aloft in an aerial lift vehicle.

SAFETY PRECAUTIONS

Note: Operator must be trained and this training must be documented prior to being allowed to use an electric chain saw.

9.04 Safety glasses or goggles, hard hat, and gloves shall be worn at all times when using an electric chain saw. Do not wear loose-fitting articles of clothing, which could get caught in the saw chain.

WARNING: When trimming trees on a joint use line, the employee must wear insulating gloves and protectors. These shall be tested before and after use as described in Section 081-710-200.

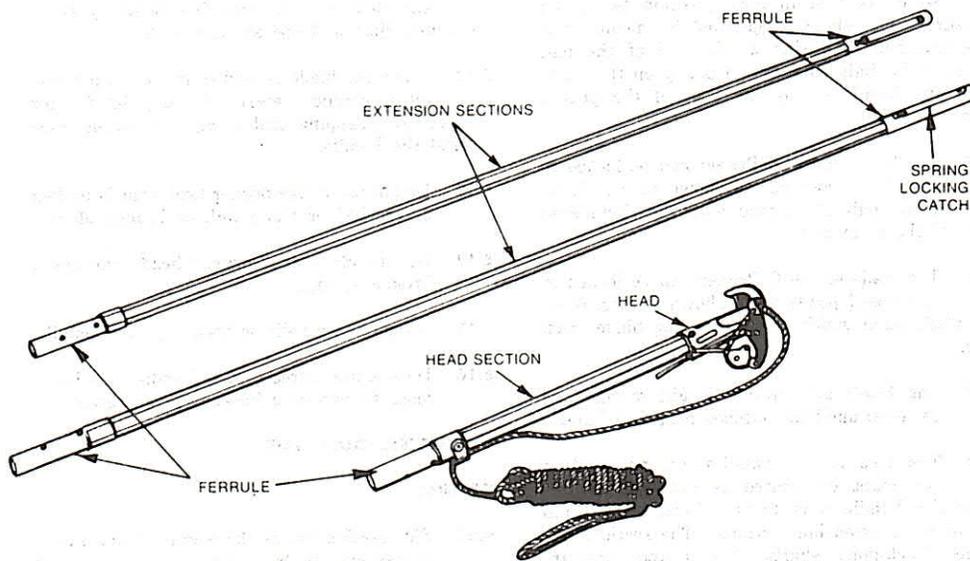


Fig. 7—B Tree Pruner With Handle Sections

9.05 Before using the saw, be certain that adjacent areas are cleared of foreign objects, which might hinder the operator or interfere with the operation of the tool or damage the cord.

9.06 Care should be exercised to avoid injury from contact with the chain. Keep the chain sharp and free of debris. A saw with either a dull or clogged chain can be hazardous.

9.07 When the saw is not in use, the chain saw should be placed in the bucket guard or the scabbard should be placed over the chain when it is stored. Do not carry the electric chain saw in the bucket unless the bucket is manned for the specific use of utilizing the saw. At all other times the saw shall be stored on the truck.

9.08 Chain saws should not be used for a cutting job that is above the chest level of the operator. Cut away from your body at all times, changing your position if necessary to work safely. Always stand behind and in line with the motor end of the saw, never beside it.

9.09 The saw should not be used in trees near an energized electric conductor where there is a possibility of the supply cord or tool contacting the conductor, whether in an aerial lift or not.

9.10 Always hold the saw firmly with both hands. Use grip (shown in Fig. 9) with the thumb on the under side of the handle bar, opposing the fingers. **Always disconnect the cord to make adjustments or fill oiler.**

9.11 Check the chain tension frequently. When the chain is damaged, it should be removed from the saw and replaced immediately for servicing or replacement.

9.12 Never start the motor while the chain is in contact with the surface of the wood.

OPERATING

9.13 Plug the saw in and remove the saw from the bucket guard using both hands, one on

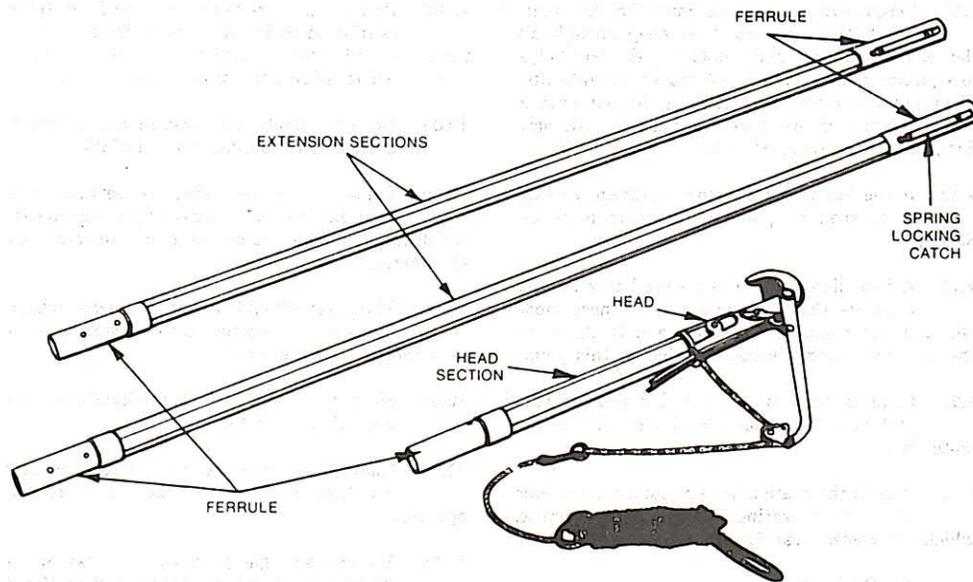


Fig. 8—C Tree Pruner With Handle Sections

the handle bar and the other around the large handle grip.

9.14 Position the saw with the bumper spikes close to the wood, start the motor and engage the work, allowing the chain to feed itself into the wood by pivoting on the bumper spikes.

9.15 Frequently, check the oil for the correct level. See Fig. 9. Depress the oil button repeatedly during operation and never allow the oil reservoir to run dry. Use oil profusely during the break-in period of a new chain.

9.16 On some saws the clutch has been designed to slip at point of excess pressure, which will stop the movement of the chain but not the motor. Through practice you will be able to judge the pressure limit of the clutch. When the chain stalls, simply release the pressure on the chain and the saw will immediately resume operation. This system prevents overloading and overheating that could result in damage to the motor.

9.17 Stop the saw every 5 to 10 minutes during the break-in period of a new chain, **unplug the saw**, and check the tension; always reset the tension whenever you find it to be incorrect. Too much tension creates excessive heat and wear; too little tension allows the chain to hammer and chatter during operation, damaging the chain, bar groove, and sprocket. See Fig. 9.

MAINTENANCE

9.18 While specific maintenance procedures vary with the name and model of the saw, the following recommendations apply to all electric chain saws.

9.19 Keep the chain in such good sharp condition that bearing down hard to make the saw cut is unnecessary. When the saw dust changes from a coarse dust or fine chips to a fine powder, stop and file the chain.

9.20 Keep the chain correctly tensioned. Occasionally soak the chain overnight in chain lubricant.

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9.21 Frequently, examine the guide bar for wear. Check that the groove is deep enough all the way around the bar. Rotating the bar helps to equalize wear and increase its serviceable life. Clean out the groove and holes of the bar with a wire. If the groove becomes packed with saw dust, oil cannot reach the chain. See Fig. 10.

9.22 If the bar is not in good condition, replace it as soon as possible for wear patterns. See Fig. 11.

9.23 A blue discoloration along the bar generally indicates that the bar and chain need more oil, that the chain is too tight, a dull chain, or the rails have been pinched together at this point.

9.24 Clean motor vent holes with a brush. This will help keep motor cool and add to the motor life.

9.25 Return the chain saw to a tool service center after 75 operating hours or 12 months, whichever comes first for the following service:

- (a) Chain sharpened
- (b) Brushes replaced
- (c) Parts cleaned and inspected
- (d) Relubrication with fresh lubricant
- (e) Electrical system tested, this includes conductor cords and extension cords.

10. GASOLINE POWERED CHAIN SAW

GENERAL

10.01 This part covers the operation and maintenance of gasoline powered chain saws.

10.02 Because of the many assorted makes and models of chain saws available, this part is general in scope. The owner's manual furnished with each saw must be consulted for specific recommendations and instructions.

SAFETY PRECAUTIONS

Note: Operator must be trained, and this training must be documented prior to being allowed to use a gas powered chain saw.

10.03 Power saws require skill and extreme caution in their use. Proper instruction in their use and constant review of safety practices is required to eliminate danger to personnel.

10.04 Do not operate this unit in an enclosure, unless there is adequate ventilation.

10.05 Before using the saw, be certain that adjacent areas are cleared of foreign objects, which might hinder the operator or interfere with the operation of the tool.

10.06 The saw should never be used where balance and footing are not secure, such as standing on icy ground.

10.07 Hold the saw with both hands during operation. See Fig. 12.

10.08 Chain saws should not be used for a cutting job that is above the chest level of the operator.

10.09 Do not use a gas powered chain saw when working on a ladder, including a platform ladder, or when working from an aerial lift bucket truck. Do not use this saw when working aloft, either on poles or on trees. Gas powered chain saws shall be used only when the workman is standing on the ground.

10.10 Safety glasses or goggles, hard hat, gloves, and hearing protection shall be worn at all times when using a chain saw.

10.11 The operator should wear sturdy shoes. Do not wear loose-fitting articles of clothing, which could get caught in the saw chain.

10.12 Care should be exercised to avoid burns from contact with heated parts, particularly the exhaust muffler or chain, after a cut has been made.

10.13 Stop engine as soon as cutting is finished. Never set the saw down with the engine running. Never carry the saw from one work area to another with the engine running.

10.14 When the saw is not in use, the chain guard or scabbard should be placed over the chain.

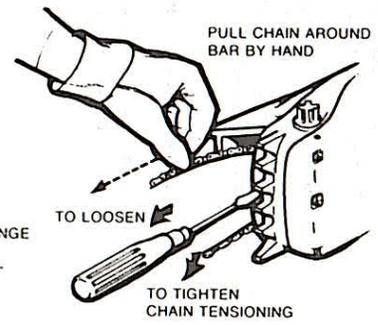
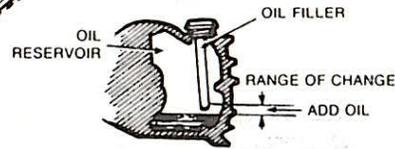


Fig. 9—Typical Electric Chain Saw

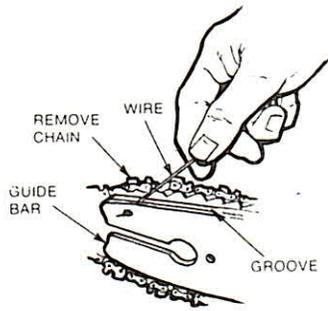


Fig. 10—Cleaning Bar

- 10.15 Keep the chain sharp. A saw with a dull chain can be a hazard.
- 10.16 Examine the material to be cut and remove any metallic object that may interfere with the proper operation of the saw.
- 10.17 Inspect all saws daily to assure that all handles and guards are in place and tight, that all controls function properly, and that the muffler is operating.

FUEL AND LUBRICATION

- 10.18 All chain saws have two cycle engines; the oil and gas must be mixed in the amounts

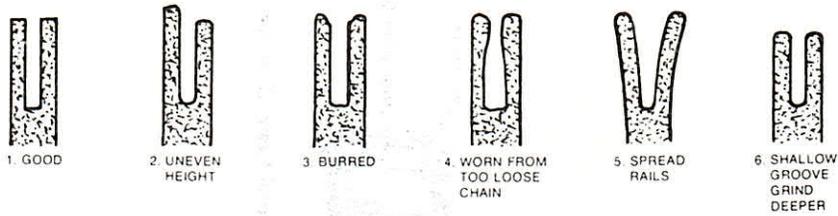


Fig. 11—Wear Pattern in Guide Bar Groove and Bar Rails

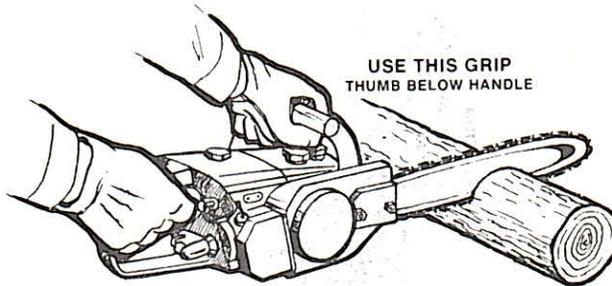


Fig. 12—Correct Grip

specified by the manufacturer. Use only regular grade gasoline.

10.19 Do not fill the saw with fuel while the engine is running. Avoid spilling fuel on a hot engine.

10.20 Wipe the engine clean and move saw at least 10 feet away from the filling location before starting the engine after fueling.

10.21 Always fill the oil reservoir for lubricating the chain each time you add fuel to the saw. Follow the manufacturer's specifications for type of oil and instructions for oiling the chain while cutting.

10.22 Keep the air and fuel filters clean.

STARTING THE SAW

10.23 Remove the guard or scabbard from the chain.

10.24 Be certain the saw blade is clear of obstructions and is resting on level ground, close to the work location. Place your foot on the saw; some models have an extra large hand grip that you place your foot in, as shown in Fig. 13.



Fig. 13—Starting Saw

10.25 Operate the choke or primer and throttle as outlined in the manufacturer's instructions. Turn on switch.

10.26 Pull the starter cord slowly, until the starter engages the engine. Pull the cord straight

out, do not pull the cord to its extreme condition or allow the cord to snap back, as damage to the return spring may result.

10.27 As soon as the engine is running, move throttle to idle position to disengage the chain.

10.28 Open choke as engine warms up; do not race the engine, until you are ready to start cutting.

OPERATING INSTRUCTIONS

10.29 Always stand with weight evenly distributed on both feet; hold the saw with both hands. Race the engine just before starting to cut; keep the saw running at full throttle. If the chain stops, back off on the saw until it picks up speed. Never force the saw; let the weight of the saw and the power of the motor do the cutting.

10.30 The basic technique to be used when cutting logs (bucking) is known as pivot action. See Fig. 14.

10.31 Kick back occurs when the chain, near the nose or on the top of the guide bar, contacts any object such as another log or branch or when the chain is pinched in a cut. **Kick back is hazardous.** Hold the saw firmly with both hands at all times when operating. See Fig. 15.

10.32 For information on felling, bucking, limbing, etc, see Section 620-310-200.

MAINTENANCE

10.33 For chain adjustment, see owner's manual.

Caution: Be sure gasoline engine is shut off.

10.34 A new chain stretches after a few cuts; therefore, check and retension a new chain frequently.

10.35 Clean air filters and fuel filters frequently and replace them when required. Keep cylinder fins clean to prevent the engine from running hot.

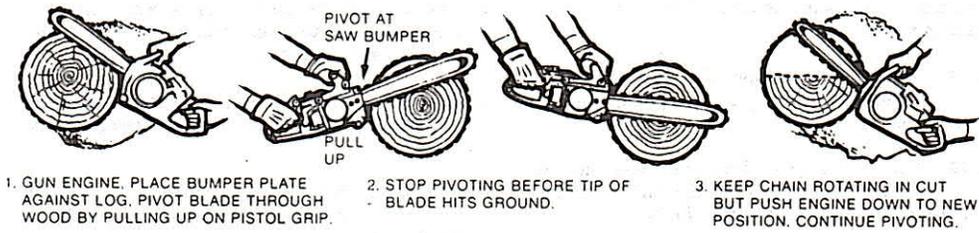


Fig. 14—Pivot Action for Cutting Logs

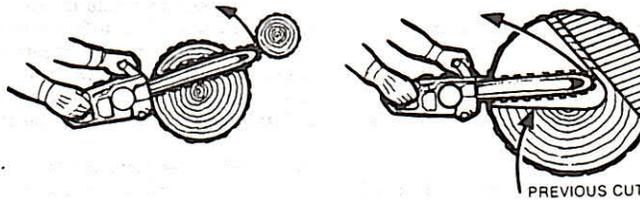


Fig. 15—Kick Back

10.36 Keep the following equipment with the saw at all times. A chain scabbard or guard, a combination spark plug and chain wrench, a spare plug, a spare sharp chain. Perform maintenance routine as recommended by the manufacturer.

Note: Remember: A sharp saw handled by a sharp operator is the prime requisite for a safe job.

11. GASOLINE POWERED RECIPROCATING SAW

11.01 See Section 649-530-120.

Note: Operator must be trained, and this training must be documented prior to being allowed to use a gasoline powered reciprocating saw.

12. PRUNING SAW

12.01 Intended for use in removing the larger limbs while working in the aerial lift truck or on a ladder. It consists of a 24-inch heavy

gauge steel blade with a series of two cutting teeth and one raker tooth, provided with a wooden handle. See Fig. 16.

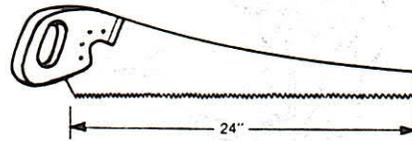


Fig. 16—Pruning Saw

13. B POLE PRUNING SAW

13.01 Intended for use with the Tree Pruner Handle, Tapered Extension sections. This saw has a curved blade, the teeth of which are arranged to cut down on the down or back stroke rather than on the forward stroke as with a standard saw. The pole saw is used to cut limbs which would otherwise be out of reach for a hand pruning

saw. Where practical, it should be used in place of the large tree pruner, since closer cuts to the main section can be made with this tool. The saw is equipped with a hook to be used in removing limbs which have been cut off; the saw is also designed to hold the B Soap Brush for painting cuts from ground level after removal of limbs or branches. The pole saw requires little attention other than keeping it sharp and occasionally rubbing the blade with a light oil to prevent rust. The blade should be covered with the Pole Pruning Saw guard at all times when not in use. The replacement blade and the guard must be ordered separately. See Fig. 17.

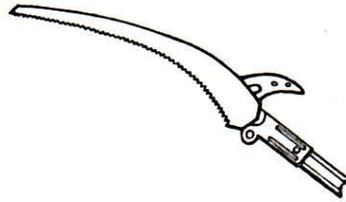


Fig. 17—Pole Pruning Saw

14. TWO-MAN SAW

14.01 The two-man saw is intended for cutting up trunks and felling trees. Although still available, this saw is seldom used because of the availability of gasoline powered saws. The two-man saw consists of a medium width 6-foot commercial steel blade provided with "Champion" teeth. Handles are not furnished with this saw and should be ordered separately. See Fig. 18. The blade should be covered with a guard at all times when not in use.

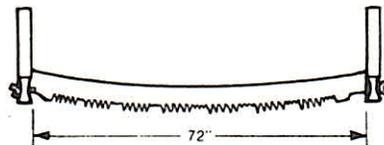


Fig. 18—Two-Man Saw

15. B PRUNING SHEARS

15.01 Pruning shears are wooden handled lopping shears used for cutting underbrush and small tree branches within reach (4 feet or less) of the craftsman when on the ground or in the aerial lift truck. This tool is not meant to take the place of a saw. The pruning shears consist of a pair of cutting jaws bolted together and attached securely to handles 2 feet long. The handles are reinforced with pitch fork handle ferrules. See Fig. 19.

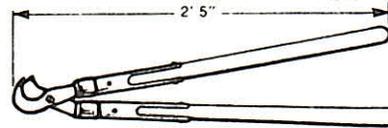


Fig. 19—Pruning Shears

16. 4-LB STEEL WEDGE

16.01 The steel wedge is used to hold open a cut when bucking trees or as an aid in felling trees.

- Do not permit the wedge head to spread or mushroom.
- Do not use if tapered end becomes cracked or broken.
- Wear safety goggles when striking wedge. See Fig. 20.

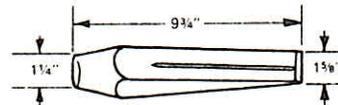


Fig. 20—Wedge

17. TRANSPORTING TREE PRUNING TOOLS

17.01 In general, tree pruning tools are sharp edged tools and, therefore, care should be

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exercised to avoid the possibility of personal injury or damage to the tools while transporting or storing as well as during their use. Racks, containers, and receptacles for the tools required for performing the various phases of telephone work have been provided and properly located on trucks. Therefore, it is important that all sharp edged tools be placed correctly in their proper locations.

17.02 Place saws in the saw boxes so that teeth are not exposed. Sharp edged tools should be located so that the sharp edge of the blade is not exposed. Guards provided for sharp edged tools should be used at all times when tools are not in use.

17.03 Tree pruner heads equipped with short tree pruner handles should be carried in the compartment of the truck. Tree pruner heads equipped with 6-foot handles shall be located on the truck so that they can always be removed by means of the handle. Caution should be exercised against grasping the hook of the pruner as it is possible that the rope or lever may inadvertently catch on some object and thus operate the blade. If there is a possibility that an employee may grasp the pruner by the hook portion, the lever should be pulled to its down position and secured in this position with the pulling rope wrapped around the handle or by other approved means.